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WEED MANAGEMENT IN HORTICULTURAL CROPS

RESEARCH RESULTS
2010

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Ohio Agricultural Research and Development Center
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This report contains the results of research on horticultural crop weed management in Ohio for 2010. This report and other resources are available on the Internet at: **www.oardc.ohio-state.edu/weedworkshop**

This bulletin does not constitute endorsement or specific recommendations. Apology is expressed for any inadvertent errors found in this report.

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TABLE OF CONTENTS

Acknowledgements iii

Bayer Crop and Rating Codes v

Weed List and Codes vii

Chemical and Adjuvant List ix

Precipitation and Temperature 2009 xi

Precipitation and Temperature 2010 xiv

Apples – Effect of Matrix Timing on Weed Control 1

Apples – Weed Control and Crop Tolerance with Indaziflam 16

Apples – Weed Control and Crop Tolerance with Treevix and Sinbar 32

Brocolli – Effect of 2, 4-D and Dicamba Simulated Drift 44

Cauliflower – Weed Control and Crop Tolerance with Pendimethalin 58

Green Onions – Marsh Yellowcress Control 65

Green Onions – Weed Control and Crop Tolerance with Pendimethalin 69

Hickory – Stump Sprout Control Using MAT28 with Escort and Arsenal 76

Lettuce – Alternatives to Kerb 82

Marsh Yellowcress – Controlling a New Weed Species Threatening Ohio Vegetable Farms 88

Peppers – Effect of 2, 4-D and Dicamba Simulated Drift 91

Pumpkins – Crop Tolerance with PRE and POST Herbicides 106

Raspberries, Red – Weed Control with Fall Applied Matrix, Sinbar, and Drive 116

Sweet Corn – Late Emerging Annual Grass Control 124

Tomatoes – Effect of 2, 4-D and Dicamba Simulated Drift 136

Tomatoes – Weed Control and Crop Tolerance with Matrix and Pruvin 178

Tomatoes – Weed Control and Crop Tolerance with Reflex 189

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Wiers Farm Inc.

Zellers Farms, Inc.

A LIST OF CROP BAYER CODES USED IN THIS REPORT:

ALLCE = Green Onion
BRSOA = Kale
BRSOB = Cauliflower
BRSOK = Broccoli
CUUSS = Pumpkin
CYAOV = Shagbark Hickory
CYPSAN = Bell Pepper
LACSA = Lettuce
LYPES = Tomato
MABSD = Apple
RUBID = Red Raspberry
RUBOC = Black Raspberry
RUBSG = Brambles; (raspberries and blackberries)
VACMY = Blackberry
ZEAMX = Sweet Corn
* not official Bayer Code.

A LIST OF ABBREVIATIONS AND DEFINITIONS USED IN THIS REPORT:

AVE = Average
BURN = Necrotic tissue
CHLOROSIS = Yellow coloration or bleaching of foliage
CM = Centimeter
CONTROL = Herbicide efficacy
DAT= Days after treatment
DOR = Dormant
DIAM = Diameter
GROWTH = Annual increase in length of shoot
INJURY = Composite assessment of stunting, chlorosis, and other visible effects
MKTB = Marketable fruit
MOSAT = Months after treatment
MSP = Mid-spring
NO = Number
OZ = Ounces
POST = Post emergent application
POSTTP = Post-transplant
PRE = Pre emergent application
PRETP = Pre-transplant
RACOBL = Randomized Complete Block Design
STEM TWIST = Distorted main stem caused by herbicide injury
STUNT = Reduction in height or growth
UNMKTB = Unmarketable fruit; green (tomatoes), diseased or cull
VEGETAT = Vegetative
WAFLUT = Weeks after flowering of the untreated control
WAT = Weeks after treatment

METHODS OF ASSESSING CROP INJURY, WEED CONTROL, AND DENSITY:

Unless otherwise stated, crop injury and weed control were assessed visually. The 0-100 linear scale was used, in which 0 = no crop injury/no control, and 100 = death of crop/complete weed control.

For weed density: LOW = Scattered, just a few weeds
MEDIUM = 1 weed per 3 feet of row
HIGH = More than 1 weed per 3 feet of row

A LIST OF WEEDS WITH BAYER CODES USED IN THIS REPORT:

BAYER CODE	COMMON NAME	BOTANICAL NAME
ABUTH	velvetleaf	*Abutilon theophrasti* Medicus
ACCVI	Virginia copperleaf	*Acalypha virginica* L.
AGRASS*	foxtail, crabgrass spp.	*Setaria, Digitaria* spp.
AGGRE	quackgrass	*Elytrigia repens* (L.) Nevski
AMABL	prostrate pigweed	*Amaranthus blitoides S. Wats.*
AMARE	redroot pigweed	*Amaranthus retroflexus* L.
AMAXX	pigweed spp.	*Amaranthus* spp.
AMBEL	common ragweed	*Ambrosia artemisiifolia* L.
AMBTR	giant ragweed	*Ambrosia trifida L.*
CAGSE	hedge bindweed	*Calystegia sepium* (L.) R. Br.
CAPBP	shepherd's purse	*Capsella bursa-pastoris* (L.) Medicus
CARHI	hairy bittercress	*Cardamine pratensis* L.
CERVU	mouseear chickweed	*Cerastium vulgatum* L.
CHEAL	common lambsquarters	*Chenopodium album* L.
CIRAR	Canada thistle	*Cirsium arvense* (L.) Scop.
CYAOV	Shagbark hickory	*Carya ovata (MILL) K.KOCH*
CYPES	yellow nutsedge	*Cyperus esculentes* L.
DACGL	orchardgrass	*Dactylis glomerata* L.
DAUCA	wild carrot	*Daucus carota* L.
DIGSA	large crabgrass	*Digitaria sanguinalis* (L.) Scop.
GLEHE	ground ivy	*Glechoma hederacea* L.
MALNE	common mallow	*Malva neglecta* Wallr.
OXAST	yellow woodsorrel	*Oxalis stricta* L.
PANDI	fall panicum	*Panicum dichotomiflorum* Michx.
PLALA	buckhorn plantain	*Plantago lanceolata* L.
PLAMA	broadleaf plantain	*Plantago major* L.
POANN	annual bluegrass	*Poa annua* L.
POLPY	Pennsylvania smartweed	*Polygonum pensylvanicum* L.
POROL	common purslane	*Portulaca oleracea* L.
PRTQU	Virginia creeper	*Parthenocissus quinquifolia*(L.) Planch.
RORIS	marsh yellowcress	*Rorippa islandica L.*

RUBFR	bramble	*Rubus fruticosis* L.
RUMOB	broadleaf dock	*Rumex obtusifolius* L.
SETFA	giant foxtail	*Setaria faberii* L.
SENVU	common groundsel	*Senecio vularis* L.
SOLPT	Eastern black nightshade	*Solanum ptycanthum* Dun.
SOOCA	Canada goldenrod	*Solidago canadensis* L.
STEME	common chickweed	*Stellaria media* (L.) Vill
TAROF	dandelion	*Taraxacum officinale* Weber in Wiggers
TOXRA	poison ivy	*Toxicodendron* radicans (L.) Ktze.
TRFPR	red clover	*Trifolium pratense* L.
TRFRE	white clover	*Trifolium repens* L.

* not official Bayer Code.

HERBICIDE LIST

TRADE NAME	COMMON NAME	FORMULATION	MANUFACTURER
Accent Q	nicosulfuron	54.5 WDG	DuPont Crop Protection
Arsenal	Isopropylamine salt of imazapyr	28.7 EC	BASF Ag Products
Atrazine	atrazine	4L	Syngenta Crop Protection, Inc.
Bicep 11 Magnum	s-metolachlor+ atrazine + safener	5.5L	Syngenta Crop Protection, Inc.
Chateau	flumioxazin	51 WDG	Valent U.S.A. Corp. Agr. Products
Clarity	dicamba	4L	BASF Ag Products
Command	clomozone	3L	FMC
Degree Extra	acetochlor+ atrazine + safener	4L	Monsanto Company
Drive	quinclorac	75 DF	BASF Ag Products
Dual Magnum	s-metolachlor	7.62 EC	Syngenta Crop Protection, Inc.
Dual 11 Magnum	s-metolachlor + safener	7.64 L	Syngenta Crop Protection, Inc.
Durango	glyphosate	4 SL	Dow AgroSciences LLC
Escort	metsulfuron methyl	60WG	DuPont Crop Protection
Garlon	triclopyr	4EC	Dow AgroSciences LLC
Goaltender	oxyfluoren	4 L	Dow AgroSciences LLC
Guardsman Max	Dimethenqamid-P+ atrazine	5 L	BASF Ag Products
Impact	topramezone	2.8 L	AMVAC
Indaziflan	indaziflan	200 SC	Bayer CropScience
Karmex	diuron	80 DF	Griffin LLC
Kerb	pronamide	50 WP	Dow AgroSciences LLC
Krenite S	fosamine ammonium	4L	DuPont Crop Protection
Laudis	tembotrione	3.5L	Bayer CropScience
Lorox	linuron	50 WP	Tessenderlo Kerley, Inc.
Lumax	s-metolachlor+ atrazine + mesotrione	4L	Syngenta Crop Protection, Inc.
MAT-28	N/A	50 SG	DuPont Crop Protection
Matrix	rimsulfuron	25 DF	DuPont Crop Protection
Milestone	aminopyralid	2L	Dow AgroSciences LLC
Nortron	ethofumesate	4L	Bayer CropScience
Option	foramsulfuron	35% WDG	Bayer CropScience
Outlook	dimethenamid	6 L	BASF Ag Products
Prowl H_2O	pendimethalin	3.8 L	BASF Ag Products
Pruvin	rimsulfuron	25DF	MANA
Reflex	fomesafen	2L	Syngenta Crop Protection, Inc.
Rely	glufosinate ammonium	200 SL	Bayer CropScience
Roundup W/M	glyphosate	4.5 L	Monsanto Company
Sandea	halosulfuron-methyl	75 DF	Gowan Company
Select	clethodim	2 L	Valent U.S.A. Corp. Agr. Products
Sencor	metribuzin	75 DF	Bayer CropScience
Sinbar	terbacil	80 WP	Tessenderlo Kerley, Inc.
Spartan	sulfentrazone	75 DF	FMC Corporation
Starane Ultra	fluroxypyr	2.8 L	Dow AgroSciences LLC
Stinger	clopyralid	3 L	Dow AgroSciences LLC
Strategy	ethalfluralin+clomozone	2.1 L	Loveland Products, Inc.
Surflan	oryzalin	4L	Dow AgroSciences LLC
Treevix	saflufenacil	70 WG	BASF Ag Products
Weedar 64	2, 4 -D amine	3.8L	NuFarm

ADJUVANT LIST

NAME	ABBREVIATION	DESCRIPTION
Ammonium sulfate	AMS	Spray grade fertilizer
Crop Oil Concentrate	COC	Paraffin base petroleum oil
Induce	NIS	Nonionic surfactant
MSO	MSO	Methylated seed oil
28% N	UAN	Urea ammonia nitrate

Daily Weather Summary for 4/1/2009 to 8/31/2009 at OARDC – Muck Crops Agricultural Research Station, Willard, Ohio 44890

Huron County, Latitude: 41° 01' N; Longitude: 82° 44' W.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp. °F	Max. Temp. °F
4/1/09	0.01	37.7	60.7	5/1/09	0.22	49.6	72.1	6/1/09	0.69	51.8	78.9	7/1/09	0	57.5	72.3	8/1/09	0	56.9	80.7
4/2/09	0	34.3	70.6	5/2/09	0	41	62.2	6/2/09	0.19	54.2	65.3	7/2/09	0.03	56.1	67.6	8/2/09	0	59	76.1
4/3/09	0.26	35.7	63.1	5/3/09	0	42.9	67.5	6/3/09	0.13	49.8	57.5	7/3/09	0	56.9	74.3	8/3/09	0	52.2	79.4
4/4/09	0	33.3	52.7	5/4/09	0	47.4	69.7	6/4/09	0	43.1	63.8	7/4/09	0	54.3	73	8/4/09	0	67.3	81.7
4/5/09	0.11	28.8	59.8	5/5/09	0	47.2	67.2	6/5/09	0	42.5	73.1	7/5/09	0	57	81.1	8/5/09	0	58.9	78.1
4/6/09	0.13	32.5	39.2	5/6/09	0.32	43.7	63.6	6/6/09	0	50.6	81.5	7/6/09	0	55	81.4	8/6/09	0	52.6	78.5
4/7/09	0	28.3	36.4	5/7/09	0.03	46.6	68.8	6/7/09	0	59.2	85.2	7/7/09	0	56.3	79.7	8/7/09	0	52.3	80
4/8/09	0	31.1	51.9	5/8/09	0.11	56.1	69.3	6/8/09	0.02	62.6	82.5	7/8/09	0	48	78	8/8/09	0.04	63	79.3
4/9/09	0	27.6	60	5/9/09	0	51.9	66.7	6/9/09	0	63.4	81.3	7/9/09	0	54.8	82.8	8/9/09	0	71.6	91.4
4/10/09	0.08	38.4	49.9	5/10/09	0	42.8	63.1	6/10/09	0	55.5	73.2	7/10/09	0.01	54.7	86	8/10/09	0	71.2	91.1
4/11/09	0	28.9	48.8	5/11/09	0.01	42.5	62	6/11/09	0.55	60.4	71.5	7/11/09	0.12	65.5	82.3	8/11/09	0	68.8	83.8
4/12/09	0	23.4	49.2	5/12/09	0	35.2	66.6	6/12/09	0	54.9	72.3	7/12/09	0	54.1	81.5	8/12/09	0	60.6	80.3
4/13/09	0.3	32.6	48.2	5/13/09	0.16	50.7	67.5	6/13/09	0.06	48.4	74.3	7/13/09	0	49.2	78.1	8/13/09	0	53.6	82.9
4/14/09	0.3	43.3	51.9	5/14/09	0.25	52.4	71.9	6/14/09	0	52.5	77.2	7/14/09	0	47.2	77.3	8/14/09	0	56.5	86
4/15/09	0.09	40.5	47.6	5/15/09	0	42.1	77.9	6/15/09	0	53.4	80.3	7/15/09	0	59.9	85.7	8/15/09	0	59.7	86.9
4/16/09	0	29.8	59.1	5/16/09	0.11	47	72.4	6/16/09	0	53.9	81.7	7/16/09	0	62	84.2	8/16/09	0	62.3	92
4/17/09	0	30.4	68.2	5/17/09	0	38	61.1	6/17/09	0.15	65.3	84.2	7/17/09	0	60.8	76.4	8/17/09	0.83	67.3	90.1
4/18/09	0	35	74.5	5/18/09	0	30.5	64.2	6/18/09	0.01	63.2	77.7	7/18/09	0	55.2	72.7	8/18/09	0.01	70.1	84.8
4/19/09	0.37	50.7	57.8	5/19/09	0	39	75.5	6/19/09	1.87	62.6	83.3	7/19/09	0	49.9	75.3	8/19/09	0.26	66.7	85.1
4/20/09	0.49	43.7	57.7	5/20/09	0	44.1	84.2	6/20/09	0.35	68.6	82.1	7/20/09	0.21	50.2	80.8	8/20/09	1.07	68.4	83.9
4/21/09	0.05	39.8	49.7	5/21/09	0	51.3	87.2	6/21/09	0	62.3	79.6	7/21/09	0.01	56.5	82	8/21/09	0	65.4	78.4
4/22/09	0	36.9	55.4	5/22/09	0	56.8	73.7	6/22/09	0	57.7	83.1	7/22/09	0.38	63.4	71.2	8/22/09	0	57.8	69.4
4/23/09	0	33.6	60.6	5/23/09	0	50	88.3	6/23/09	0	60.7	85.2	7/23/09	1.2	62	74.1	8/23/09	0	54.2	69.7
4/24/09	0	48.1	86	5/24/09	0	55.7	82.3	6/24/09	0	63.2	90	7/24/09	0.01	57.6	78.9	8/24/09	0	57.8	78.6
4/25/09	0	63.8	87	5/25/09	0	52.8	75.9	6/25/09	0.63	67.7	94.8	7/25/09	0.29	63.8	76.8	8/25/09	0	54.2	81.2
4/26/09	0	61.6	86.5	5/26/09	1.47	55.8	79.6	6/26/09	0.01	65.7	82.7	7/26/09	0.05	61.7	78.7	8/26/09	0	60	82
4/27/09	0	60.9	85.8	5/27/09	0.73	66.8	79.7	6/27/09	0	57.3	81.5	7/27/09	0.01	59.2	81.9	8/27/09	0	60.8	74.2
4/28/09	0.18	44.6	66.9	5/28/09	0.43	58.9	72.1	6/28/09	0.01	62.2	85.1	7/28/09	0	63.2	84.3	8/28/09	0.3	59.3	79.5
4/29/09	0.01	45.4	61.9	5/29/09	0	53.8	76	6/29/09	0	57.3	80.3	7/29/09	0.16	63.8	77.4	8/29/09	0.3	55.2	73
4/30/09	0.36	52.6	68.3	5/30/09	0	48.2	74.3	6/30/09	0	57.3	71.4	7/30/09	0.01	58.8	79.5	8/30/09	0	49.7	65.9
				5/31/09	0	48.9	69					7/31/09	0.75	62.4	78.9	8/31/09	0	42.9	68.7

Daily Weather Summary for 4/1/2009 to 8/31/2009 at OARDC – North Central Agricultural Research Station, Fremont, Ohio 43420
Sandusky County, Latitude: 41° 21' N; Longitude: 83° 07' W; Elevation: 636 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/09	0.02	40.7	60.6	5/1/09	0.02	50.9	71.8	6/1/09	0.17	52.3	82.1	7/1/09	0.01	59.7	74.3	8/1/09	0	58.2	82.4
4/2/09	0	41.5	68.6	5/2/09	0.01	40.7	64.5	6/2/09	0.09	54.3	65.6	7/2/09	0.03	57.8	72.2	8/2/09	0.01	59.9	77.8
4/3/09	0.37	36.2	62.6	5/3/09	0	44.4	68.5	6/3/09	0	48.6	60.3	7/3/09	0	59.1	76.6	8/3/09	0	54.9	83
4/4/09	0	34	54	5/4/09	0	48.1	63.4	6/4/09	0	44	63.8	7/4/09	0	55.4	74.4	8/4/09	0	68.1	83.4
4/5/09	0.29	32.8	54.1	5/5/09	0	45.1	66.5	6/5/09	0	45	73.6	7/5/09	0	58.3	82.1	8/5/09	0	61.1	77.4
4/6/09	0.1	34.1	40.5	5/6/09	0.07	43.5	68.5	6/6/09	0	52.5	82.1	7/6/09	0	55.9	83.3	8/6/09	0	52.6	78.8
4/7/09	0	29.8	37.4	5/7/09	0.09	43.7	69.7	6/7/09	0	58.2	85.5	7/7/09	0	58	80.9	8/7/09	0	55	80.4
4/8/09	0	31.2	53.6	5/8/09	0.1	56.3	73	6/8/09	0.06	63.4	84.8	7/8/09	0	51.8	76.6	8/8/09	0.13	64.3	81.8
4/9/09	0	30.3	60.3	5/9/09	0	51.3	66.5	6/9/09	0	63.3	79.8	7/9/09	0	57.1	79.4	8/9/09	0	73.1	94.1
4/10/09	0.04	37.7	44.7	5/10/09	0	43	64.1	6/10/09	0.06	58.2	68.7	7/10/09	0	57.6	88.5	8/10/09	0	72.8	91.2
4/11/09	0	32.6	49.5	5/11/09	0	45.5	62.8	6/11/09	0.19	61.6	73.6	7/11/09	0.36	66.2	86.1	8/11/09	0.03	68.5	85.7
4/12/09	0	25.6	47.7	5/12/09	0	38.5	67.3	6/12/09	0	56.4	73.3	7/12/09	0	56	82.1	8/12/09	0	61.6	79
4/13/09	0.12	33.6	48	5/13/09	0.12	48	66.8	6/13/09	0.05	50.4	73.8	7/13/09	0	51.8	80.5	8/13/09	0	57.1	83.1
4/14/09	0.37	40.7	48.9	5/14/09	0.97	53.6	71.7	6/14/09	0	54.2	80	7/14/09	0	50.8	76.5	8/14/09	0	55	87.9
4/15/09	0.03	37.8	46.9	5/15/09	0	45.7	78.5	6/15/09	0	56.9	76.6	7/15/09	0	58.7	86.8	8/15/09	0	61.3	89.8
4/16/09	0	30.3	60.8	5/16/09	0.01	48.6	71.3	6/16/09	0	54.1	78.1	7/16/09	0	65.9	85	8/16/09	0	65.4	93.8
4/17/09	0	32.1	70.9	5/17/09	0	38.6	60.7	6/17/09	0.12	65.4	82.4	7/17/09	0	61.4	78	8/17/09	0.19	71	92.1
4/18/09	0	38.8	75.2	5/18/09	0	35.6	65.1	6/18/09	0	64.5	79.7	7/18/09	0	59.1	74.4	8/18/09	0.01	69.7	85.7
4/19/09	0.28	46.3	60.1	5/19/09	0	45.4	76.3	6/19/09	2.6	63.2	82.9	7/19/09	0	51.4	77.9	8/19/09	0	65	87.9
4/20/09	0.3	43.7	58.2	5/20/09	0	49	87.5	6/20/09	0.02	68.5	84.3	7/20/09	0	54.1	81.7	8/20/09	0.03	68.9	86.2
4/21/09	0.07	39.7	51.7	5/21/09	0	57.1	87.7	6/21/09	0	64.5	81.2	7/21/09	0	56.4	80.6	8/21/09	0.06	66.3	82.2
4/22/09	0	37.6	56.3	5/22/09	0	58.1	70.8	6/22/09	0	61.8	83.1	7/22/09	0.15	62.7	70.5	8/22/09	0.14	61.5	70.6
4/23/09	0	33	61.7	5/23/09	0	50.3	85.8	6/23/09	0	62.5	86.4	7/23/09	0.95	63.9	77.9	8/23/09	0	60.4	74.1
4/24/09	0	48.5	87.3	5/24/09	0	55.7	73.5	6/24/09	0	66.3	93	7/24/09	0	59.6	81.4	8/24/09	0	57.4	79.9
4/25/09	0	65.3	86.4	5/25/09	0	56.7	67.9	6/25/09	0.56	69.9	94.8	7/25/09	0.14	67	79.2	8/25/09	0	55.6	86.1
4/26/09	0	62.7	86.3	5/26/09	0.15	59	74.9	6/26/09	0	68	83.3	7/26/09	0	63.4	80.8	8/26/09	0	61.3	84.4
4/27/09	0	64.2	85.2	5/27/09	1.8	63.4	83.8	6/27/09	0	61.1	81.4	7/27/09	0	59	83.9	8/27/09	0	59	70.2
4/28/09	0.5	46.4	69.8	5/28/09	0.17	59.2	75	6/28/09	0.02	64.3	86.2	7/28/09	0	66.3	86.3	8/28/09	0.4	59.2	74.1
4/29/09	0.03	46.4	57.3	5/29/09	0	55	77.5	6/29/09	0	59.6	81.1	7/29/09	0.49	66.8	80	8/29/09	0.23	54.6	74.9
4/30/09	0.52	48.3	69.2	5/30/09	0	48.1	75.6	6/30/09	0	58.4	74.1	7/30/09	0	57.6	80.5	8/30/09	0	51.6	68.1
				5/31/09	0	50.5	68.3					7/31/09	0	63.3	81.4	8/31/09	0	49.7	70.3

Daily Weather Summary for 4/1/2009 to 8/31/2009 at OARDC, Wooster, Ohio 44691
Wayne County, one mile south of Wooster; Latitude: 40° 47' N; Longitude: 81° 55' W; Elevation: 1020 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/09	0.21	43.1	59.9	5/1/09	0.93	49.2	74.2	6/1/09	0.61	40.9	77.9	7/1/09	0	55	70.6	8/1/09	0.03	55.1	80.8
4/2/09	0	33.4	70.9	5/2/09	0	44.6	62.1	6/2/09	0.03	57.8	70.8	7/2/09	0.06	57.2	67.3	8/2/09	0.36	58.2	75.9
4/3/09	0.51	37.1	60.7	5/3/09	0	43.5	68.4	6/3/09	0.37	50.8	58	7/3/09	0	60.3	73.1	8/3/09	0	51.9	80
4/4/09	0	34.3	52	5/4/09	0	48.8	68.5	6/4/09	0	41.2	68	7/4/09	0	53.1	72.8	8/4/09	0	65.2	80.8
4/5/09	0.02	30	60	5/5/09	0	45.3	65.9	6/5/09	0	43.4	73.5	7/5/09	0	56	79.9	8/5/09	0	55.7	77.3
4/6/09	0.08	31.4	45.1	5/6/09	0.34	44.3	58	6/6/09	0	43.4	80.1	7/6/09	0	53.9	81.2	8/6/09	0	50.1	76.3
4/7/09	0.06	27.7	35.8	5/7/09	0	50.5	69.2	6/7/09	0	53.7	82.5	7/7/09	0	53.7	78.1	8/7/09	0	52	79.2
4/8/09	0	31.9	52.3	5/8/09	0.02	57	70.5	6/8/09	0.1	61.2	80	7/8/09	0	47.9	77.3	8/8/09	0	63.3	77.7
4/9/09	0	27.5	58.7	5/9/09	0.65	51.8	70	6/9/09	0	63.2	80.7	7/9/09	0	52.1	81.4	8/9/09	0.01	70.6	89.2
4/10/09	0.41	41	49.2	5/10/09	0	44.3	62	6/10/09	0.03	55.5	76.9	7/10/09	0	54	85.3	8/10/09	2.38	68.7	88.2
4/11/09	0	31.2	48.6	5/11/09	0	39.8	63.3	6/11/09	0.05	58.7	72.8	7/11/09	0.17	66.3	81	8/11/09	0.01	67.3	82.8
4/12/09	0	25.7	49.1	5/12/09	0	33.4	67.2	6/12/09	0.01	54.8	73.5	7/12/09	0	55.1	80.8	8/12/09	0	60.7	79.1
4/13/09	0.15	33.6	49.9	5/13/09	0.27	44.1	67.8	6/13/09	0	48.3	76.3	7/13/09	0	52.7	77.5	8/13/09	0	56.3	83.9
4/14/09	0.42	43.4	50.7	5/14/09	0.14	50.5	72.8	6/14/09	0	49.8	77.8	7/14/09	0	48.6	77.6	8/14/09	0	60.2	87.6
4/15/09	0.35	44.4	49.5	5/15/09	0	42.6	80	6/15/09	0	51.8	80.3	7/15/09	0	54.8	85.1	8/15/09	0	61	85.5
4/16/09	0	31.4	62.5	5/16/09	0.06	50.8	74.8	6/16/09	0	50.7	82.4	7/16/09	0	63.6	84.5	8/16/09	0	62.6	89.4
4/17/09	0	31	68.1	5/17/09	0	36.8	58.1	6/17/09	0.94	64.3	79.2	7/17/09	0.34	56.6	78.6	8/17/09	0	64.4	89.8
4/18/09	0	34.5	73.2	5/18/09	0	30.5	61.8	6/18/09	0.02	61.7	75.4	7/18/09	0	53.4	71.8	8/18/09	0.03	69.7	83.1
4/19/09	0.17	52.4	67.1	5/19/09	0	33.1	75.2	6/19/09	1.11	58.8	85.7	7/19/09	0	51.9	73.3	8/19/09	0.07	68.1	85.1
4/20/09	0.68	43.6	63.3	5/20/09	0	40.2	82.3	6/20/09	0.06	69.3	82.1	7/20/09	0	50.6	78.7	8/20/09	1.96	66.4	84.1
4/21/09	0.01	38.9	53.6	5/21/09	0	46.4	84.3	6/21/09	0	62.7	79.1	7/21/09	0	55.6	82	8/21/09	0.04	66.4	79.2
4/22/09	0.22	36.2	53.1	5/22/09	0	52.1	80.8	6/22/09	0	57	82.8	7/22/09	0.19	57.7	73.5	8/22/09	0	59	73.9
4/23/09	0.01	32.3	61.8	5/23/09	0	49.8	85.3	6/23/09	0	58.5	83.8	7/23/09	0.55	59.7	73.3	8/23/09	0	56.9	69.5
4/24/09	0	43.3	83.4	5/24/09	0	55.7	82.8	6/24/09	0	59.5	88.7	7/24/09	0	56.1	79.4	8/24/09	0	54.3	77.8
4/25/09	0	66.9	84.9	5/25/09	0	55.7	78.2	6/25/09	0.38	65.4	91.1	7/25/09	0.07	58.5	76.2	8/25/09	0	52.3	82.7
4/26/09	0	55.9	84.2	5/26/09	0.25	58.2	78.8	6/26/09	0	61.2	83.5	7/26/09	0	62.5	79.3	8/26/09	0	58.2	81.6
4/27/09	0	56.3	83.9	5/27/09	0.01	66	81.5	6/27/09	0	55.3	81.1	7/27/09	0	58.9	81.6	8/27/09	0	65.1	77.7
4/28/09	0.04	45.1	72.1	5/28/09	0.52	61	76.7	6/28/09	0.03	58.4	82.6	7/28/09	0.01	59.5	84.4	8/28/09	0.74	63.3	77.3
4/29/09	0	45.9	64.4	5/29/09	0	54.3	74.9	6/29/09	0	55.1	77.8	7/29/09	0.52	64.5	76.5	8/29/09	0.24	60.4	73.5
4/30/09	0.02	48.8	68.1	5/30/09	0	49.6	73.5	6/30/09	0	58.2	72.8	7/30/09	0.01	61.8	79.2	8/30/09	0	48.8	64.2
				5/31/09	0	48.6	64.7					7/31/09	0.98	60.6	80.6	8/31/09	0	43.6	69.1

Daily Weather Summary for 4/1/2010 to 8/31/2010 at OARDC - Muck Crops Agricultural Research Station, Willard, Ohio 44890
Huron County, Latitude: 41° 01' N; Longitude: 82° 44' W.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/10	0	51.1	78.4	5/1/10	0.07	63.2	72.9	6/1/10	0	63.2	79.3	7/1/10	0	50.7	73.1	8/1/10	0	59.7	84.6
4/2/10	0	57.8	82.4	5/2/10	0.14	62.1	72.3	6/2/10	0.05	60.5	82.1	7/2/10	0	46.6	78.5	8/2/10	0	59.7	87.4
4/3/10	0	46.6	77.8	5/3/10	0.12	55.6	73.8	6/3/10	0	63.9	81.6	7/3/10	0	52.7	85.7	8/3/10	0.25	69.4	81.4
4/4/10	0	35.7	71.3	5/4/10	0	53.7	73.0	6/4/10	0.06	60.5	78.8	7/4/10	0	59.0	90.7	8/4/10	0.38	70.5	85.6
4/5/10	0.15	55.3	75.7	5/5/10	0.19	54.4	83.8	6/5/10	0.89	66.7	77.7	7/5/10	0	70.5	92.4	8/5/10	0.36	66.5	85.2
4/6/10	0	61.4	82.9	5/6/10	0.13	551.2	67.9	6/6/10	0.04	59.5	76.0	7/6/10	0	67.3	91.9	8/6/10	0.01	59.8	78.8
4/7/10	0.01	57.7	73.8	5/7/10	0.27	48.2	83.4	6/7/10	0.01	53.0	69.2	7/7/10	0	63.4	91.6	8/7/10	0	56.2	80.2
4/8/10	0.43	38.5	60.4	5/8/10	0.01	40.8	60.5	6/8/10	0.13	45.8	71.0	7/8/10	0.21	66.9	94.2	8/8/10	0	60.6	84.3
4/9/10	0	35.1	47.1	5/9/10	0	35.1	54.8	6/9/10	0.52	57.0	78.6	7/9/10	0.51	63.6	78.0	8/9/10	0	63.8	88.3
4/10/10	0	28.0	65.4	5/10/10	0	30.5	59.5	6/10/10	0	59.7	79.2	7/10/10	0	57.4	84.8	8/10/10	0	68.9	88.7
4/11/10	0	42.2	65.0	5/11/10	0.89	42.3	67.5	6/11/10	0.04	60.6	81.8	7/11/10	0	61.6	86.1	8/11/10	0	68.4	86.6
4/12/10	0	37.0	64.2	5/12/10	0.53	45.8	52.2	6/12/10	0.18	69.9	85.5	7/12/10	0.02	66.7	85.1	8/12/10	0	70.5	84.3
4/13/10	0.04	41.2	56.3	5/13/10	0.01	46.1	81.8	6/13/10	0.09	66.6	79.2	7/13/10	0	65.2	80.8	8/13/10	0	65.0	88.6
4/14/10	0	39.0	69.5	5/14/10	0.10	54.8	72.7	6/14/10	0	63.8	81.2	7/14/10	0	63.5	88.4	8/14/10	0.04	71.5	91.4
4/15/10	0	46.6	83.3	5/15/10	0	44.0	68.6	6/15/10	0.21	66.6	80.3	7/15/10	0	64.3	89.3	8/15/10	0.25	70.0	88.7
4/16/10	0	49.2	75.5	5/16/10	0	51.4	63.9	6/16/10	0	64.8	81.4	7/16/10	0.04	70.1	87.2	8/16/10	0	61.0	81.2
4/17/10	0	36.2	50.4	5/17/10	0.53	52.2	57.2	6/17/10	0	59.1	75.3	7/17/10	0	65.6	90.8	8/17/10	0	56.9	81.1
4/18/10	0	32.8	51.1	5/18/10	0.04	53.8	62.7	6/18/10	0	53.2	86.6	7/18/10	0.25	63.4	89.1	8/18/10	0	63.3	83.7
4/19/10	0	26.9	62.1	5/19/10	0	48.7	67.4	6/19/10	0	67.7	88.8	7/19/10	0.01	68.6	84.5	8/19/10	0	60.0	86.8
4/20/10	0	30.0	62.7	5/20/10	0	44.3	78.9	6/20/10	0	60.8	84.7	7/20/10	0.19	69.4	81.2	8/20/10	0	61.7	89.7
4/21/10	0	29.9	69.0	5/21/10	0.15	59.0	73.3	6/21/10	0	60.0	85.7	7/21/10	0	66.1	87.9	8/21/10	1.06	67.6	80.1
4/22/10	0	38.6	57.0	5/22/10	0.01	62.7	74.2	6/22/10	0	69.1	89.2	7/22/10	0	61.6	88.5	8/22/10	0.01	64.3	78.8
4/23/10	0	33.4	67.5	5/23/10	0	54.5	82.7	6/23/10	1.26	66.2	91.8	7/23/10	0.79	72.0	93.5	8/23/10	0	63.1	77.2
4/24/10	0.35	48.4	67.2	5/24/10	0	59.9	83.3	6/24/10	0.13	63.9	80.0	7/24/10	0.58	71.3	90.5	8/24/10	0.01	56.5	76.5
4/25/10	1.74	54.9	70.0	5/25/10	0	61.3	85.5	6/25/10	0	60.5	82.9	7/25/10	0.08	63.0	77.8	8/25/10	0	59.5	80.2
4/26/10	0.18	44.8	56.6	5/26/10	0	60.2	86.8	6/26/10	0	61.3	88.5	7/26/10	0	56.0	81.9	8/26/10	0	51.6	73.9
4/27/10	0	34.9	48.7	5/27/10	0	59.3	90.0	6/27/10	1.71	68.6	92.6	7/27/10	0	58.0	85.0	8/27/10	0.13	45.8	78.2
4/28/10	0	30.4	57.4	5/28/10	0.08	64.5	85.1	6/28/10	1.07	66.3	82.8	7/28/10	0.63	65.4	88.9	8/28/10	0	48.0	83.6
4/29/10	0	36.1	67.6	5/29/10	0	58.4	82.8	6/29/10	0	56.7	72.0	7/29/10	0	61.6	77.9	8/29/10	0	53.0	91.9
4/30/10	0	56.1	82.5	5/30/10	0	53.9	89.0	6/30/10	0	51.3	71.8	7/30/10	0	57.3	80.7	8/30/10	0.19	63.2	90.8
				5/31/10	1.75	65.7	85.1					7/31/10	0	65.4	78.8	8/31/10	0	65.0	90.0

Daily Weather Summary for 4/1/2010 to 8/31/2010 at OARDC – North Central Agricultural Research Station, Fremont, Ohio 43420
Sandusky County, Latitude: 41° 21' N; Longitude: 83° 07' W; Elevation: 636 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/10	0	55.5	80.8	5/1/10	0.07	64.1	74.6	6/1/10	0.01	64.9	81.6	7/1/10	0	53.9	72.5	8/1/10	0	61.8	82.5
4/2/10	0	58.7	83.5	5/2/10	0.19	63.2	74.2	6/2/10	0.04	62.5	80.4	7/2/10	0	50.7	80.0	8/2/10	0	58.4	89.0
4/3/10	0	46.8	78.0	5/3/10	0.25	56.6	74.6	6/3/10	0	62.7	82.0	7/3/10	0	56.5	86.5	8/3/10	0	70.6	83.5
4/4/10	0.01	36.8	73.2	5/4/10	0	54.1	73.2	6/4/10	0	61.2	85.7	7/4/10	0	63.8	91.6	8/4/10	0.44	70.6	87.5
4/5/10	0	58.0	77.4	5/5/10	0.01	57.8	83.0	6/5/10	0.08	68.5	78.8	7/5/10	0	72.9	92.3	8/5/10	0.01	69.3	86.9
4/6/10	0	61.5	85.8	5/6/10	0.02	50.3	68.3	6/6/10	0.17	60.5	77.6	7/6/10	0	68.4	92.3	8/6/10	0	60.9	81.7
4/7/10	0.66	56.8	74.3	5/7/10	0.38	48.6	83.1	6/7/10	0	57.2	71.8	7/7/10	0	66.2	94.3	8/7/10	0	56.8	82.3
4/8/10	0.47	38.6	58.4	5/8/10	0	42.1	58.6	6/8/10	0.33	50.3	73.7	7/8/10	0.18	69.9	94.0	8/8/10	0	63.5	86.2
4/9/10	0	34.5	49.2	5/9/10	0	36.0	55.9	6/9/10	0.26	58.1	80.1	7/9/10	0.06	66.4	81.1	8/9/10	0	65.9	89.6
4/10/10	0	29.3	68.0	5/10/10	0	33.8	55.3	6/10/10	0	60.6	79.9	7/10/10	0.01	61.9	87.4	8/10/10	0	68.2	88.4
4/11/10	0	43.8	64.8	5/11/10	0.73	42.9	65.9	6/11/10	0.06	62.0	83.9	7/11/10	0	63.7	88.3	8/11/10	1.00	68.3	84.5
4/12/10	0	35.2	60.2	5/12/10	0.14	47.2	51.4	6/12/10	0.41	71.9	88.1	7/12/10	0	70.5	86.5	8/12/10	0	67.9	84.9
4/13/10	0.08	43.9	55.4	5/13/10	0.07	45.9	83.2	6/13/10	0.01	67.5	80.0	7/13/10	0	66.4	82.1	8/13/10	0	66.8	87.7
4/14/10	0	40.6	70.8	5/14/10	0.85	56.4	70.2	6/14/10	0.18	65.7	81.6	7/14/10	0.01	65.5	86.5	8/14/10	0.14	69.5	86.8
4/15/10	0	47.9	83.9	5/15/10	0	47.8	68.5	6/15/10	0.05	67.6	77.7	7/15/10	0	66.9	91.8	8/15/10	0.48	70.0	90.5
4/16/10	0.03	49.8	70.3	5/16/10	0	53.0	60.7	6/16/10	0	67.6	82.4	7/16/10	0.30	72.0	87.3	8/16/10	0	60.5	81.9
4/17/10	0	37.7	50.7	5/17/10	1.28	53.7	57.8	6/17/10	0	60.1	75.3	7/17/10	0	66.8	91.9	8/17/10	0	58.1	82.1
4/18/10	0	32.3	51.4	5/18/10	0.05	52.1	58.9	6/18/10	0.06	56.1	88.7	7/18/10	0.25	64.9	899	8/18/10	0	64.0	82.0
4/19/10	0	32.5	60.3	5/19/10	0	52.1	66.2	6/19/10	0	66.5	88.1	7/19/10	0	69.8	83.9	8/19/10	0	61.0	87.3
4/20/10	0	34.4	62.2	5/20/10	0	46.5	81.1	6/20/10	0	63.0	84.3	7/20/10	0	69.4	83.9	8/20/10	0	64.1	89.6
4/21/10	0	35.2	70.3	5/21/10	0.43	60.5	74.8	6/21/10	0	63.1	86.1	7/21/10	0	67.6	90.9	8/21/10	0.45	67.8	77.1
4/22/10	0	40.5	54.0	5/22/10	0	62.6	76.3	6/22/10	0.01	71.0	89.6	7/22/10	0.02	62.2	88.5	8/22/10	0	63.5	77.2
4/23/10	0	39.5	61.9	5/23/10	0	56.6	84.9	6/23/10	0.68	66.8	90.9	7/23/10	0.65	71.5	96.7	8/23/10	0	63.4	76.6
4/24/10	0.71	49.1	66.5	5/24/10	0	59.3	83.1	6/24/10	0.04	67.6	81.3	7/24/10	0.13	71.6	93.2	8/24/10	0	61.5	77.5
4/25/10	1.10	48.7	67.1	5/25/10	0	60.7	85.3	6/25/10	0	63.8	83.2	7/25/10	0.12	65.3	80.4	8/25/10	0	63.7	80.2
4/26/10	0.31	46.4	61.0	5/26/10	0	62.2	85.7	6/26/09	0	63.2	88.9	7/26/10	0	59.4	83.3	8/26/10	0	54.8	72.1
4/27/10	0	39.0	51.4	5/27/10	0	64.2	87.4	6/27/09	0.81	67.9	91.3	7/27/10	0	58.4	85.9	8/27/10	0	48.7	79.3
4/28/10	0	31.7	58.5	5/28/10	0.03	63.6	82.3	6/28/09	0.19	65.4	85.0	7/28/10	0	66.3	90.3	8/28/10	0	50.8	85.1
4/29/10	0	38.2	69.7	5/29/10	0	62.7	8039	6/29/09	0	60.4	73.8	7/29/10	0.01	64.0	78.5	8/29/10	0	57.9	92.2
4/30/10	0	53.8	83.0	5/30/10	0	58.0	88.8	6/30/09	0	51.8	73.3	7/30/10	0	60.3	82.4	8/30/10	0	66.0	93.5
				5/31/10	1.56	65.5	84.5					7/31/10	0	67.0	83.5	8/31/10	0	66.3	91.4

Daily Weather Summary for 4/1/2010 to 8/31/2010 at OARDC, Wooster, Ohio 44691

Wayne County, one mile south of Wooster; Latitude: 40° 47' N; Longitude: 81° 55' W; Elevation: 1020 ft.

APRIL				MAY				JUNE				JULY				AUGUST			
Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp. °F	Date	Precip (in)	Min. Temp °F	Max. Temp °F	Date	Precip (in)	Min. Temp. °F	Max. Temp. °F	Date	Precip. (in)	Min. Temp °F	Max. Temp °F
4/1/10	0	46.5	80.0	5/1/10	0	60.7	71.5	6/1/10	0	59.9	78.7	7/1/10	0	48.0	73.3	8/1/10	0	59.7	85.9
4/2/10	0	47.6	83.9	5/2/10	0.19	60.3	72.9	6/2/10	0.74	56.6	83.6	7/2/10	0	47.0	78.9	8/2/10	0	62.2	88.2
4/3/10	0	46.7	79.1	5/3/10	0.21	56.5	73.2	6/3/10	0.29	63.3	77.9	7/3/10	0	51.1	84.1	8/3/10	0.04	69.2	79.9
4/4/10	0	37.9	71.5	5/4/10	0.01	53.7	71.3	6/4/10	0.69	61.3	77.9	7/4/10	0	56.3	88.1	8/4/10	0.10	71.6	85.7
4/5/10	0	50.6	76.5	5/5/10	0	45.1	81.4	6/5/10	1.77	65.1	76.5	7/5/10	0	65.8	90.3	8/5/10	0.42	69.0	85.1
4/6/10	0.01	58.4	82.4	5/6/10	0.12	51.8	67.0	6/6/10	0.01	59.3	76.1	7/6/10	0	67.8	90.3	8/6/10	0.01	61.3	78.9
4/7/10	0	67.8	76.0	5/7/10	0.40	42.4	81.4	6/7/10	0	49.9	68.3	7/7/10	0	64.9	90.7	8/7/10	0	57.2	81.3
4/8/10	0.06	38.7	68.4	5/8/10	0.06	42.6	62.1	6/8/10	0	45.3	71.6	7/8/10	0	64.7	91.7	8/8/10	0	58.4	84.7
4/9/10	0	34.4	44.9	5/9/10	0	35.9	53.1	6/9/10	0.97	56.3	76.9	7/9/10	1.03	65.6	78.2	8/9/10	0	61.7	87.8
4/10/10	0	26.6	63.2	5/10/10	0	30.3	59.4	6/10/10	0	58.2	78.2	7/10/10	0.01	58.2	84.9	8/10/10	0	69.7	87.9
4/11/10	0	44.1	67.1	5/11/10	0.92	42.7	65.1	6/11/10	0.01	56.5	81.8	7/11/10	0	60.7	86.4	8/11/10	0	66.7	88.9
4/12/10	0	34.3	63.9	5/12/10	0.42	48.2	57.8	6/12/10	0.16	69.6	83.2	7/12/10	0.43	66.6	82.9	8/12/10	0	71.3	87.5
4/13/10	0.03	41.7	54.3	5/13/10	0.01	45.2	81.5	6/13/10	0.31	64.3	81.9	7/13/10	0.45	66.1	81.6	8/13/10	0	67.5	89.1
4/14/10	0	39.3	65.6	5/14/10	0.01	57.0	75.5	6/14/10	0	62.7	79.6	7/14/10	0.01	64.5	85.2	8/14/10	0.65	66.8	90.8
4/15/10	0	40.2	80.2	5/15/10	0.01	44.5	69.1	6/15/10	0.15	66.3	80.3	7/15/10	0	64.1	88.7	8/15/10	0.13	71.6	86.4
4/16/10	0.14	50.2	76.5	5/16/10	0	52.1	67.5	6/16/10	0	67.8	81.1	7/16/10	0.03	71.1	85.9	8/16/10	0	62.3	79.9
4/17/10	0	38.2	50.9	5/17/10	0.38	53.8	57.1	6/17/10	0	57.9	73.5	7/17/10	0	62.9	88.7	8/17/10	0	58.1	79.9
4/18/10	0	34.2	47.2	5/18/10	0.03	53.8	59.6	6/18/10	0	53.1	84.0	7/18/10	0.12	67.4	87.7	8/18/10	0	63.1	86.5
4/19/10	0	26.0	59.1	5/19/10	0	49.0	69.8	6/19/10	0	66.1	87.2	7/19/10	0.09	68.6	85.8	8/19/10	0	59.7	86.2
4/20/10	0	31.0	63.1	5/20/10	0	44.2	80.9	6/20/10	0	62.5	82.6	7/20/10	0.03	68.5	81.5	8/20/10	0	62.6	89.5
4/21/10	0	32.4	66.6	5/21/10	0.10	53.0	73.6	6/21/10	0	59.6	86.7	7/21/10	0	68.1	86.2	8/21/10	0.63	66.0	83.4
4/22/10	0	39.7	63.9	5/22/10	0.42	59.9	73.6	6/22/10	0.12	68.8	86.7	7/22/10	0.16	64.9	86.7	8/22/10	0.05	65.4	80.1
4/23/10	0	33.2	67.4	5/23/10	0.02	55.6	82.2	6/23/10	0.99	67.2	89.1	7/23/10	0.01	75.9	91.8	8/23/10	0.01	63.3	76.7
4/24/10	0.28	47.0	64.0	5/24/10	0	58.4	80.8	6/24/10	0.09	62.8	79.2	7/24/10	2.39	71.2	90.8	8/24/10	0	60.6	74.7
4/25/10	1.08	53.6	71.4	5/25/10	0	58.2	84.0	6/25/10	0	60.2	82.9	7/25/10	0.12	63.0	79.4	8/25/10	0.22	60.5	78.6
4/26/10	0.13	46.4	60.0	5/26/10	0	59.7	84.6	6/26/10	0	60.1	86.4	7/26/10	0.01	55.1	81.6	8/26/10	0.01	52.0	73.9
4/27/10	0	33.6	49.2	5/27/10	0	58.4	86.9	6/27/10	0.29	68.8	89.7	7/27/10	0	59.1	85.0	8/27/10	0	46.7	77.6
4/28/10	0	29.1	56.4	5/28/10	0	63.9	83.2	6/28/10	0.20	65.2	82.6	7/28/10	0.01	63.5	88.5	8/28/10	0	48.5	84.4
4/29/10	0	31.3	67.1	5/29/10	0	58.8	83.8	6/29/10	0	53.0	72.0	7/29/10	0	60.9	78.0	8/29/10	0	52.3	89.0
4/30/10	0	46.5	80.8	5/30/10	0	54.7	87.4	6/30/10	0	49.9	70.0	7/30/10	0	56.5	79.2	8/30/10	0	60.1	91.6
				5/31/10	0.91	64.3	83.5					7/31/10	0	61.8	80.1	8/31/10	0	61.9	90.3

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: To evaluate the efficacy of Matrix tank mixes on perennial and annual weed control when applied at two different spring timings: "dormant" and "mid-spring".

TRIAL SUMMARY: Treatments applied mid-spring (MSP) provided much better weed control compared to the dormant (DOR) applications. Control of wild carrot and buckhorn plantain was weak with the dormant treatments, but excellent with the mid-spring application. The Matrix/Karmex/Roundup/NIS tank mix was the best overall treatment. Virginia creeper was poorly controlled regardless of herbicide and timing.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Reliability: Reliable
Initiation Date: 3/31/2010
Planned Completion Date: 8/30/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	AMBEL	common ragweed	*Ambrosia artemisiifolia* L.
2	AMBTR	giant ragweed	*Ambrosia trifida* L.
3	DAUCA	wild carrot	*Daucus carota* L.
4	OXAST	yellow woodsorrel	*Oxalis stricta* L.
5	PLALA	buckhorn plantain	*Plantago lanceolata* L.
6	POLPY	Pennsylvania smartweed	*Polygonum penslyvanicum* L.
7	PRTQU	Virginia creeper	*Parthenocissus quinquifolia* (L.)
8	RUMOB	broadleaf dock	*Rumex obtusifolius* L.
9	SOOCA	Canada goldenrod	*Solidago canadenis* L.
10	TRFRE	white clover	*Trifolium repens* L.

Crop 1: MABSD Apple
Planting Date: 5/15/1998
Row Spacing: 15 FT

Variety: Jonathon
Planting Method: Conventional
Perennial Age: 12 years

SITE AND DESIGN

Plot Width, Unit: 12 FT
Site Type: Orchard
Tillage Type: None

Plot Length, Unit: 15 ft
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 16
% Silt: 72
% Clay: 12

% OM: 2.5
pH: 6
CEC: 14

Texture: Silt Loam
Soil Name: Wooster Silt Loam
Fert. Level: Moderate

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APPLES - EFFECT OF MATRIX TIMING ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A	B
Application Date:	3/31/2010	5/4/2010
Time of Day:	2-3 PM	11 AM-12 PM
Application Method:	Spray	Spray
Application Timing:	Dormant	Mid-spring
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	62.6 F	65.6 F
% Relative Humidity:	48.5	57
Wind Velocity, Unit:	5 MPH	5 MPH
Dew Presence (Y/N):	N	N
Soil Moisture:	Moist	Moist
% Cloud Cover:	20	50
Soil Temperature:	50.9 F	61.7 F

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	MABSD, Dormant	MABSD, Mid-spring
Stage Scale:	Dormant	post-bloom
Height, Unit:	25 FT	25 FT

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AMBEL, Dormant	AMBEL, Mid-spring
Stage Scale:	.	1-1.5"
Density, Unit:	.	High, Plot
Weed 2 Code, Stage:	AMBTR, Dormant	AMBTR, Mid-spring
Stage Scale:	.	2.5"
Density, Unit:	.	Medium, Plot
Weed 3 Code, Stage:	DAUCA, Dormant	DAUCA, Mid-spring
Stage Scale:	1"	1-1.5"
Density, Unit:	High, Plot	High, Plot
Weed 4 Code, Stage:	OXAST, Dormant	OXAST, Mid-spring
Stage Scale:	.	1"
Density, Unit:	.	Medium, Plot
Weed 5 Code, Stage:	PLALA, Dormant	PLALA, Mid-spring
Stage Scale:	.	2-2.5"
Density, Unit:	.	High, Plot
Weed 6 Code, Stage:	POLPY, Dormant	POLPY, Mid-spring
Stage Scale:	.	1"
Density, Unit:	.	High, Plot
Weed7 Code, Stage:	PRTQU, Dormant	PRTQU, Mid-spring
Stage Scale:	.	1-3"
Density, Unit:	.	Medium, Plot
Weed8 Code, Stage:	RUMOB, Dormant	RUMOB, Mid-spring
Stage Scale:	.	0.5-1"
Density, Unit:	.	Medium, Plot

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APPLES - EFFECT OF MATRIX TIMING ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed9 Code, Stage:	SOOCA, Dormant	SOOCA, Mid-spring
Stage Scale:	1.5-2"	2-7"
Density, Unit:	Medium, Plot	Medium, Plot
Weed10 Code, Stage:	TRFRE, Dormant	TRFRE, Mid-spring
Stage Scale:	0.5"	0.5-2"
Density, Unit:	High, Plot	High, Plot

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40	40
Nozzle Type:	Flat Fan	Flat Fan
Nozzle Size:	8002 VS	8002 VS
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	4	4
Band Width, Unit:	72 IN	72 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	2.7 MPH	2.7 MPH
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

TRIAL COMMENTS:

Visual observations were taken at 30, 60, 90, and 120 days after application. The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100= death of crop/ complete weed control. For weed density: LOW = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot.

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APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					DAUCA	TRFRE	RUMOB	SOOCA	OXAST
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				TREE	WEED	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				4/30/10	4/30/10	4/30/10	4/30/10	4/30/10	4/30/10
Trt-Eval Interval				30DATDOR	30DATDOR	30DATDOR	30DATDOR	30DATDOR	30DATDOR
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
UNTREATED CONTROL				0	0	0	0	0	0
MATRIX +	4	oz/a	DOR	0	98	96	99	51	97
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR	0	94	94	99	14	99
KARMEX	3	lb/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR	0	97	98	98	72	98
PROWL H2O	2	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR	0	58	68	77	46	79
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP						
KARMEX	3	lb/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP						
PROWL H2O	2	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
LSD (P=.05)				0	23.3	23.3	26.5	37.4	27.2
Standard Deviation				0	15.1	15.1	17.2	24.3	17.7
CV				0	21.8	21.3	23.1	66.2	23.6

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APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				PLALA	AMBEL	AMBTR	POLPY	PRTQU
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				4/30/10	4/30/10	4/30/10	4/30/10	4/30/10
Trt-Eval Interval				30DATDOR	30DATDOR	30DATDOR	30DATDOR	30DATDOR
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11
UNTREATED CONTROL				0	0	0	0	0
MATRIX +	4	oz/a	DOR	83	96	99	99	50
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	71	99	99	99	25
KARMEX	3	lb/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	96	98	97	98	50
PROWL H2O	2	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR	43	79	0	99	25
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
KARMEX	3	lb/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
PROWL H2O	2	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
LSD (P=.05)				14.3	26.9	1.6	1.4	50.2
Standard Deviation				9.3	17.4	1.0	0.9	32.6
CV				15.9	23.5	1.8	1.1	109.7

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APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					DAUCA	TRFRE	RUMOB	SOOCA
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				TREE	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				5/28/10	5/28/10	5/28/10	5/28/10	5/28/10
Trt-Eval Interval				60DATDOR	60DATDOR	60DATDOR	60DATDOR	60DATDOR
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	12	13	14	15	16
UNTREATED CONTROL				0	0	0	0	0
MATRIX +	4	oz/a	DOR	0	87	99	97	99
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	0	91	99	97	99
KARMEX	3	lb/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	0	83	99	99	90
PROWL H2O	2	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR	0	34	76	87	80
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
KARMEX	3	lb/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
PROWL H2O	2	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
LSD (P=.05)				0	31.4	26.0	18.0	14.9
Standard Deviation				0	20.4	16.9	11.7	9.7
CV				0	34.6	22.6	15.4	13.2

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				OXAST	PLALA	AMBEL	AMBTR	POLPY
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				5/28/10	5/28/10	5/28/10	5/28/10	5/28/10
Trt-Eval Interval				60DATDOR	60DATDOR	60DATDOR	60DATDOR	60DATDOR
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	17	18	19	20	21
UNTREATED CONTROL				0	0	0	0	0
MATRIX +	4	oz/a	DOR	99	67	93	74	99
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	99	55	99	89	99
KARMEX	3	lb/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	99	99	92	80	99
PROWL H2O	2	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR	99	42	55	42	77
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
KARMEX	3	lb/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
PROWL H2O	2	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
LSD (P=.05)				0	35.1	38.8	43.8	30.7
Standard Deviation				0	22.8	25.2	28.4	19.9
CV				0	43.2	37.2	49.8	26.6

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				PRTQU		DAUCA	TRFRE	RUMOB
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	TREE	WEED	WEED	WEED
Rating Data Type				CONTROL	INJURY	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				5/28/10	6/30/10	6/30/10	6/30/10	6/30/10
Trt-Eval Interval				60DATDOR	90DATDOR	90DATDOR	90DATDOR	90DATDOR
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	22	23	24	25	26
UNTREATED CONTROL				0	0	0	0	0
MATRIX +	4	oz/a	DOR	59	0	78	99	99
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	50	0	90	99	99
KARMEX	3	lb/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	42	0	55	99	99
PROWL H2O	2	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR	29	0	0	0	0
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
KARMEX	3	lb/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
PROWL H2O	2	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
LSD (P=.05)				50.4	0	27.3	0	0
Standard Deviation				32.7	0	17.7	0	0
CV				91.4	0	39.8	0	0

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				SOOCA	OXAST	PLALA	AMBEL	AMBTR
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				6/30/10	6/30/10	6/30/10	6/30/10	6/30/10
Trt-Eval Interval				90DATDOR	90DATDOR	90DATDOR	90DATDOR	90DATDOR
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	27	28	29	30	31
UNTREATED CONTROL				0	0	0	0	0
MATRIX +	4	oz/a	DOR	98	97	0	62	95
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	99	99	15	99	99
KARMEX	3	lb/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	DOR	96	99	93	90	82
PROWL H2O	2	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR					
NIS	0.25	qt/a	DOR					
ROUNDUP+	1	qt/a	DOR	0	0	0	0	0
NIS	0.25	qt/a	DOR					
MATRIX +	4	oz/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
KARMEX	3	lb/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
MATRIX +	4	oz/a	MSP					
PROWL H2O	2	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
ROUNDUP+	1	qt/a	MSP					
NIS	0.25	qt/a	MSP					
LSD (P=.05)				4.7	3.1	20.6	31.9	21.5
Standard Deviation				3.0	2.0	13.3	20.7	13.8
CV				5.2	3.4	61.7	41.3	25.0

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				POLPY	PRTQU	PRTQU		DAUCA	TRFRE
Crop Code				APPLE		APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	TREE	WEED	WEED
Rating Data Type				CONTROL		CONTROL	INJURY	CONTROL	CONTROL
Rating Unit				%		%	%	%	%
Rating Date				6/30/10	6/30/10	6/30/10	6/15/10	6/15/10	6/15/10
Trt-Eval Interval				90DATDOR		90DATDOR	30DATMSP	30DATMSP	30DATMSP
# Subsamples, Dec.				0		0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	32		33	34	35	36
UNTREATED CONTROL				0		0			
MATRIX +	4	oz/a	DOR	99		50			
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR	99		49			
KARMEX	3	lb/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR	99		62			
PROWL H2O	2	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR	77		0			
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	MSP				0	98	97
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP				0	98	99
KARMEX	3	lb/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP				0	99	99
PROWL H2O	2	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP				0	86	84
NIS	0.25	qt/a	MSP						
LSD (P=.05)				30.7		46.9	0.0	9.0	10.5
Standard Deviation				19.9		30.4	0.0	5.5	6.5
CV				26.6		95.1	0.0	5.8	6.8

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APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				RUMOB	SOOCA	OXAST	PLALA	AMBEL	AMBTR
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	TREE	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	INJURY	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				6/15/10	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10
Trt-Eval Interval				30DATMSP	30DATMSP	30DATMSP	30DATMSP	30DATMSP	30DATMSP
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	37	38	39	40	41	42
UNTREATED CONTROL									
MATRIX +	4	oz/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
KARMEX	3	lb/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
PROWL H2O	2	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	MSP	99	96	99	96	99	99
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	99	98	99	97	99	99
KARMEX	3	lb/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	99	97	99	99	99	99
PROWL H2O	2	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP	99	96	99	98	99	99
NIS	0.25	qt/a	MSP						
LSD (P=.05)				0	6.1	0	6.5	0	0
Standard Deviation				0	3.7	0	4.0	0	0
CV				0	3.9	0	4.1	0	0

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				POLPY	PRTQU		DAUCA	TRFRE	RUMOB
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	TREE	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				6/15/10	6/15/10	7/4/10	7/4/10	7/4/10	7/4/10
Trt-Eval Interval				30DATMSP	30DATMSP	60DATMSP	60DATMSP	60DATMSP	60DATMSP
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	43	44	45	46	47	48
UNTREATED CONTROL									
MATRIX +	4	oz/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
KARMEX	3	lb/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
PROWL H2O	2	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	MSP	99	88	0	98	100	100
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	99	88	0	95	100	100
KARMEX	3	lb/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	99	84	0	95	83	100
PROWL H2O	2	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP	99	85	0	33	58	88
NIS	0.25	qt/a	MSP						
LSD (P=.05)				0	8.2	0	17.7	33.3	20.0
Standard Deviation				0	5.0	0	11.1	20.8	12.5
CV				0	5.9	0	13.8	24.5	12.9

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				SOOCA	OXAST	PLALA	AMBEL	AMBTR	POLPY
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	TREE	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				7/4/10	7/4/10	7/4/10	7/4/10	7/4/10	7/4/10
Trt-Eval Interval				60DATMSP	60DATMSP	60DATMSP	60DATMSP	60DATMSP	60DATMSP
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	49	50	51	52	53	54
UNTREATED CONTROL									
MATRIX +	4	oz/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
KARMEX	3	lb/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
PROWL H2O	2	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	MSP	85	74	85	78	100	100
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	90	100	89	100	100	100
KARMEX	3	lb/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	88	100	94	100	100	100
PROWL H2O	2	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP	81	58	91	100	100	100
NIS	0.25	qt/a	MSP						
LSD (P=.05)				15.9	39.7	8.9	30.9	0	0
Standard Deviation				9.9	24.8	5.6	19.3	0	0
CV				11.6	30.0	6.2	20.5	0	0

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				PRTQU		DAUCA	TRFRE	RUMOB	SOOCA
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	TREE	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				7/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10
Trt-Eval Interval				60DATMSP	90DATMSP	90DATMSP	90DATMSP	90DATMSP	90DATMSP
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	55	56	57	58	59	60
UNTREATED CONTROL									
MATRIX +	4	oz/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
KARMEX	3	lb/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
PROWL H2O	2	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	MSP	55	0	99	100	100	95
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	53	0	100	100	100	96
KARMEX	3	lb/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	50	0	98	99	100	89
PROWL H2O	2	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP	65	0	21	78	100	13
NIS	0.25	qt/a	MSP						
LSD (P=.05)				47.2	0	33.4	21.5	0.0	27.5
Standard Deviation				29.5	0	20.9	13.4	0.0	17.2
CV				53.1	0	26.3	14.3	0.0	23.5

The Ohio State University

APPLES - EFFECT OF MATRIX TIMING
ON WEED CONTROL

Trial ID: APPLEEFFMATTIMWC 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				OXAST	PLALA	AMBEL	AMBTR	POLPY	PRTQU
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	TREE	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				8/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10
Trt-Eval Interval				90DATMSP	90DATMSP	90DATMSP	90DATMSP	90DATMSP	90DATMSP
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	61	62	63	64	65	66
UNTREATED CONTROL									
MATRIX +	4	oz/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
KARMEX	3	lb/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	DOR						
PROWL H2O	2	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
ROUNDUP+	1	qt/a	DOR						
NIS	0.25	qt/a	DOR						
MATRIX +	4	oz/a	MSP	88	89	98	98	100	58
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	100	93	100	100	100	63
KARMEX	3	lb/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
MATRIX +	4	oz/a	MSP	95	99	100	100	100	53
PROWL H2O	2	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP						
NIS	0.25	qt/a	MSP						
ROUNDUP+	1	qt/a	MSP	21	90	100	100	100	65
NIS	0.25	qt/a	MSP						
LSD (P=.05)				37.8	9.2	4.0	4.0	0	53.1
Standard Deviation				23.6	5.8	2.5	2.5	0	33.2
CV				31.1	6.2	2.5	2.5	0	55.9

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: Compare indaziflam + glyphosate and indaziflam + glufosinate to current local practices for length of weed control and crop injury.

TRIAL SUMMARY: Herbicide treatments did not injure apple trees. Seventeen weeks after application, indaziflam/Rely 280 provided the best overall control. Possible antagonism of wild carrot control was observed when indaziflam was tank-mixed with glyphosate. Chateau did not control yellow wood sorrel.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 5/4/2010
Planned Completion Date: 9/15/10

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	AGRASS	annual grasses (various)	*Setaria, Digitaria* spp.
2	AMBEL	common ragweed	*Ambrosia artemisiifolia* L.
3	AMBTR	giant ragweed	*Ambrosia trifida* L.
4	CARHI	hairy bittercress	*Cardamine pratenis* L.
5	CIRAR	Canada thistle	*Cirsium arvense* (L.)
6	DAUCA	wild carrot	*Daucus carota* L.
7	OXAST	yellow woodsorrel	*Oxalis stricta* L.
8	PLALA	buckhorn plantain	*Plantago lanceolata* L.
9	POLPY	Pennsylvania smartweed	*Polygonum penslyvanicum* L.
10	PRTQU	Virginia creeper	*Parthenocissus quinquifolia* (L.)
11	RUMOB	broadleaf dock	*Rumex obtusifolius* L.
12	SOOCA	Canada goldenrod	*Solidago canadenis* L.
13	TAROF	dandelion	*Taraxacum officinale* Weber in Wiggers
14	TRFRE	white clover	*Trifolium repens* L.
15	TOXRA	poison ivy	*Toxicodendron radicans* (L) Ktze.
16	CAGSE	hedge bindweed	*Calystegia sepium* (L.) R.Br.

Crop 1: MABSD Apple
Planting Date: 5/15/98
Perennial Age: 12 Year
Row Spacing: 15 FT
Soil Temperature: 59.2 F

Variety: Idared
Planting Method: Conventional
Spacing Within Row: 15 FT
Soil Moisture: Normal

SITE AND DESIGN

Plot Width, Unit: 10 FT
Site Type: Orchard
Tillage Type: None

Plot Length, Unit: 15 FT
Reps: 3
Study Design: RACOBL

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

SOIL DESCRIPTION

% Sand: 16	% OM: 3.11	Texture: Silt Loam
% Silt: 72	pH: 6	Soil Name: Wooster Silt Loam
% Clay: 12	CEC: 14	Fert. Level: Moderate

APPLICATION DESCRIPTION

	A
Application Date:	5/4/2010
Time of Day:	12:30 PM
Application Method:	Spray
Application Timing:	POST
Applic. Placement:	Broadcast
Air Temp., Unit:	67.4 F
% Relative Humidity:	54.8
Wind Velocity, Unit:	5 MPH
Soil Temp., Unit:	59.2 F
Soil Moisture:	Adequate
% Cloud Cover:	30

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	MABSD, POST
Stage Scale:	POST Bloom
Height, Unit:	20 FT

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AGRASS, POST
Stage Scale:	2-3"
Density, Unit:	High, Plot
Weed 2 Code, Stage:	AMBEL, POST
Stage Scale:	1-1.5"
Density, Unit:	High, Plot
Weed 3 Code, Stage:	AMBTR, POST
Stage Scale:	2.5"
Density, Unit:	Medium, Plot
Weed 4 Code, Stage:	CARHI, POST
Stage Scale:	4"
Density, Unit:	Medium, Plot
Weed 5 Code, Stage:	CIRAR, POST
Stage Scale:	2.5"
Density, Unit:	Low, Plot
Weed 6 Code, Stage:	DAUCA, POST
Stage Scale:	1-1.5"
Density, Unit:	High, Plot

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed 7 Code, Stage:	OXAST, POST
Stage Scale:	1"
Density, Unit:	Medium, Plot
Weed 8 Code, Stage:	PLALA, POST
Stage Scale:	2-2.5"
Density, Unit:	High, Plot
Weed 9 Code, Stage:	POLPY, POST
Stage Scale:	1"
Density, Unit:	Medium, Plot
Weed10 Code, Stage:	PRTQU, POST
Stage Scale:	1-3"
Density, Unit:	Medium, Plot
Weed11 Code, Stage:	RUMOB, POST
Stage Scale:	0.5-1"
Density, Unit:	Medium, Plot
Weed12 Code, Stage:	SOOCA, POST
Stage Scale:	2-7"
Density, Unit:	Medium, Plot
Weed13 Code, Stage:	TAROF, POST
Stage Scale:	1-2"
Density, Unit:	Medium, Plot
Weed14 Code, Stage:	TRFRE, POST
Stage Scale:	0.5-2"
Density, Unit:	High, Plot
Weed15 Code, Stage:	TOXRA, POST
Stage Scale:	None
Density, Unit:	None
Weed16 Code, Stage:	CAGSE, POST
Stage Scale:	None
Density, Unit:	None

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	Flat Fan
Nozzle Size:	8002VS
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Spray Volume, Unit:	25 GPA
Propellant:	CO2

TRIAL COMMENTS:

Visual observations were taken at 1, 3, 6, 13 and 17 weeks after application. The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100= death of crop/ complete weed control. For weed density: L0W = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot.

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					CARHI	DAUCA	TRFRE	RUMOB
Crop Code				MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated				TREE	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				5/11/10	5/11/10	5/11/10	5/11/10	5/11/10
Trt-Eval Interval				1WAT	1WAT	1WAT	1WAT	1WAT
# Subsamples, Dec.				0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
1	UNTREATED CONTROL				0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	POST	0	85	77	77	83
3	INDAZIFLAM+	5	oz/a	POST	0	50	66	30	75
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	POST	0	88	88	88	88
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	POST	0	90	90	85	90
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	POST	0	88	88	88	88
	MATRIX	4	oz/a						
LSD (P=.05)					0	23.9	26.3	26.7	15.7
Standard Deviation					0	13.2	14.4	14.7	8.6
CV					0	19.7	21.2	23.9	12.2

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			SOOCA	OXAST	PLALA	AMBEL	AMBTR	POLPY
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			5/11/10	5/11/10	5/11/10	5/11/10	5/11/10	5/11/10
Trt-Eval Interval			1WAT	1WAT	1WAT	1WAT	1WAT	1WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	6	7	8	9	10	11
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	72	87	85	90	90	90
3	INDAZIFLAM+	5	oz/a	77	60	58	96	89	96
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	88	88	88	88	88	88
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	90	90	90	90	90	90
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	88	77	88	93	93	93
	MATRIX	4	oz/a						
LSD (P=.05)				8.3	43.2	24.9	7.5	12.2	8.6
Standard Deviation				4.6	23.7	13.7	4.1	6.7	4.7
CV				6.6	35.5	20.0	5.4	9.0	6.2

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			PRTQU		AGRASS	CARHI	DAUCA	TRFRE
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	TREE	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			5/11/10	5/25/10	5/25/10	5/25/10	5/25/10	5/25/10
Trt-Eval Interval			1WAT	3 WAT	3WAT	3 WAT	3 WAT	3 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	12	13	14	15	16	17
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	81	0	99	99	99	91
3	INDAZIFLAM+	5	oz/a	81	0	99	99	30	68
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	93	0	99	99	99	99
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	95	0	66	99	82	93
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	83	0	99	99	99	99
	MATRIX	4	oz/a						
LSD (P=.05)				20.7	0	42.4	0	32.1	17.7
Standard Deviation				11.4	0	23.3	0	17.7	9.7
CV				15.7	0	30.3	0	25.9	13.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			RUMOB	SOOCA	OXAST	PLALA	AMBEL	AMBTR
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			5/25/10	5/25/10	5/25/10	5/25/10	5/25/10	5/25/10
Trt-Eval Interval			3 WAT	3 WAT	3 WAT	3 WAT	3 WAT	3 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	18	19	20	21	22	23
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	99	61	99	99	99	99
3	INDAZIFLAM+	5	oz/a	96	81	94	99	98	94
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	99	98	99	99	99	99
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	96	86	99	99	99	96
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	99	99	99	99	99	99
	MATRIX	4	oz/a						
LSD (P=.05)				5.7	40.3	6.0	0	1.7	7.5
Standard Deviation				3.1	22.1	3.3	0	0.9	4.1
CV				3.9	31.2	4.0	0	1.2	5.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			POLPY	CIRAR	PRTQU		AGRASS	CAGSE
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	TREE	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			5/25/10	5/25/10	5/25/10	6/15/10	6/15/10	6/15/10
Trt-Eval Interval			3 WAT	3WAT	3 WAT	6 WAT	6 WAT	6 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	24	25	26	27	28	29
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	99	99	61	0	65	74
3	INDAZIFLAM+	5	oz/a	99	94	80	0	93	99
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	99	98	96	0	99	63
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	99	99	94	0	99	91
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	99	99	88	0	94	81
	MATRIX	4	oz/a						
LSD (P=.05)				0	6.4	45.3	0	39.7	54.3
Standard Deviation				0	3.5	24.9	0	21.8	29.9
CV				0	4.3	35.7	0	29.2	43.9

The Ohio State University

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WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			CARHI	DAUCA	TRFRE	TAROF	RUMOB	SOOCA
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			6/15/10	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10
Trt-Eval Interval			6 WAT	6 WAT	6 WAT	6WAT	6 WAT	6 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	30	31	32	33	34	35
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	99	98	83	85	90	90
3	INDAZIFLAM+	5	oz/a	99	23	36	66	99	85
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	99	99	99	99	99	89
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	99	8	43	99	96	86
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	99	99	99	99	91	99
	MATRIX	4	oz/a						
LSD (P=.05)				0	32.7	43.3	43.8	10.5	17.6
Standard Deviation				0	18.0	23.8	24.1	5.8	9.7
CV				0	33.0	39.6	32.3	7.3	13.0

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			OXAST	PLALA	PIVY	AMBEL	AMBTR	POLPY
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			6/15/10	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10
Trt-Eval Interval			6 WAT	6 WAT	6WAT	6 WAT	6 WAT	6 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	36	37	38	39	40	41
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	60	96	66	99	99	99
3	INDAZIFLAM+	5	oz/a	33	99	99	99	83	99
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	96	99	33	99	99	99
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	99	99	66	99	99	99
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	98	86	99	99	99	99
	MATRIX	4	oz/a						
LSD (P=.05)				47.3	8.7	78.3	0	21.0	0
Standard Deviation				26.0	4.8	43.0	0	11.5	0
CV				40.4	6.0	71.1	0	14.5	0

The Ohio State University

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WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			CIRAR	PRTQU		AGRASS	CAGSE	CARHI
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	TREE	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			6/15/10	6/15/10	8/4/10	8/4/10	8/4/10	8/4/10
Trt-Eval Interval			6 WAT	6 WAT	13 WAT	13 WAT	13 WAT	13 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt Treatment	Product	Product						
No. Name	Rate	Rate Unit	42	43	44	45	46	47
1 UNTREATED CONTROL			0	0	0	0	0	0
2 ROUNDUP WEATHERMAX	1	qt/a	99	43	0	0	67	100
3 INDAZIFLAM+	5	oz/a	69	70	0	100	100	100
ROUNDUP WEATHERMAX	1	qt/a						
4 INDAZIFLAM+	5	oz/a	99	66	0	95	62	100
RELY 280	56	oz/a						
5 CHATEAU+	9	oz/a	99	71	0	55	77	93
NIS	0.25	qt/a						
6 RELY 280+	56	oz/a	99	68	0	67	43	100
MATRIX	4	oz/a						
LSD (P=.05)			38.2	61.6	0	57.7	66.2	8.6
Standard Deviation			21.0	33.9	0	31.7	36.4	4.7
CV			27.1	63.8	0	60.1	62.7	5.7

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			DAUCA	TRFRE	TAROF	RUMOB	SOOCA	OXAST
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			8/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10
Trt-Eval Interval			13 WAT	13 WAT	13 WAT	13 WAT	13 WAT	13 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	48	49	50	51	52	53
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	97	100	27	88	83	27
3	INDAZIFLAM+	5	oz/a	0	17	100	100	67	95
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	100	100	100	100	100	33
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	72	85	97	100	100	57
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	97	100	100	100	100	75
	MATRIX	4	oz/a						
LSD (P=.05)				7.6	23.0	34.1	7.7	28.8	58.7
Standard Deviation				4.2	12.6	18.8	4.2	15.8	32.2
CV				6.9	18.9	26.6	5.2	21.1	67.5

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			PLALA	TOXRA	AMBEL	AMBTR	POLPY	CIRAR
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			8/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10
Trt-Eval Interval			13 WAT	13 WAT	13 WAT	13 WAT	13 WAT	13 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	54	55	56	57	58	59
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	97	63	67	67	67	67
3	INDAZIFLAM+	5	oz/a	100	67	100	100	100	67
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	100	100	100	100	100	87
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	100	67	100	100	100	100
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	90	100	100	100	100	100
	MATRIX	4	oz/a						
LSD (P=.05)				14.0	72.1	42.9	42.9	42.9	59.4
Standard Deviation				7.7	39.7	23.6	23.6	23.6	32.7
CV				9.5	60.0	30.3	30.3	30.3	46.7

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			PRTQU		AGRASS	CAGSE	CARHI	DAUCA
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	TREE	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			8/4/10	9/4/10	9/4/10	9/4/10	9/4/10	9/4/10
Trt-Eval Interval			13 WAT	17 WAT	17 WAT	17 WAT	17 WAT	17 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt Treatment	Product	Product						
No. Name	Rate	Rate Unit	60	61	62	63	64	65
1 UNTREATED CONTROL			0	0	0	0	0	0
2 ROUNDUP WEATHERMAX	1	qt/a	33	0	23	66	99	93
3 INDAZIFLAM+	5	oz/a	53	0	52	99	99	0
ROUNDUP WEATHERMAX	1	qt/a						
4 INDAZIFLAM+	5	oz/a	95	0	95	63	99	90
RELY 280	56	oz/a						
5 CHATEAU+	9	oz/a	67	0	60	43	99	66
NIS	0.25	qt/a						
6 RELY 280+	56	oz/a	67	0	47	33	99	98
MATRIX	4	oz/a						
LSD (P=.05)			79.0	0	57.3	70.4	0	21.8
Standard Deviation			43.4	0	31.5	38.7	0	12.0
CV			82.7	0	68.4	76.4	0	20.8

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			TRFRE	TAROF	RUMOB	SOOCA	OXAST	PLALA
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			9/4/10	9/4/10	9/4/10	9/4/10	9/4/10	9/4/10
Trt-Eval Interval			17 WAT	17 WAT	17 WAT	17 WAT	17 WAT	17 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	66	67	68	69	70	71
1	UNTREATED CONTROL			0	0	0	0	0	0
2	ROUNDUP WEATHERMAX	1	qt/a	99	99	43	86	0	93
3	INDAZIFLAM+	5	oz/a	27	53	66	43	99	99
	ROUNDUP WEATHERMAX	1	qt/a						
4	INDAZIFLAM+	5	oz/a	99	99	99	99	38	99
	RELY 280	56	oz/a						
5	CHATEAU+	9	oz/a	82	93	99	83	0	99
	NIS	0.25	qt/a						
6	RELY 280+	56	oz/a	99	99	99	93	10	80
	MATRIX	4	oz/a						
LSD (P=.05)				33.9	36.4	61.9	34.7	40.9	22.0
Standard Deviation				18.6	20.0	34.0	19.1	22.5	12.1
CV				27.6	27.1	50.3	28.3	91.6	15.4

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH INDAZIFLAM

Trial ID: APPWCCT717 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code			TOXRA	AMBEL	AMBTR	POLPY	CIRAR	PRTQU
Crop Code			MABSD	MABSD	MABSD	MABSD	MABSD	MABSD
Part Rated			WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit			%	%	%	%	%	%
Rating Date			9/4/10	9/4/10	9/4/10	9/4/10	9/4/10	9/4/10
Trt-Eval Interval			17 WAT	17 WAT	17 WAT	17 WAT	17 WAT	17 WAT
# Subsamples, Dec.			0	0	0	0	0	0
Trt Treatment	Product	Product						
No. Name	Rate	Rate Unit	72	73	74	75	76	77
1 UNTREATED CONTROL			0	0	0	0	0	0
2 ROUNDUP WEATHERMAX	1	qt/a	99	99	99	99	73	66
3 INDAZIFLAM+	5	oz/a	99	99	99	66	99	50
ROUNDUP WEATHERMAX	1	qt/a						
4 INDAZIFLAM+	5	oz/a	99	99	99	99	66	53
RELY 280	56	oz/a						
5 CHATEAU+	9	oz/a	99	99	99	99	66	66
NIS	0.25	qt/a						
6 RELY 280+	56	oz/a	99	99	99	99	99	66
MATRIX	4	oz/a						
LSD (P=.05)			0	0	0	42.4	75.4	88.9
Standard Deviation			0	0	0	23.3	41.5	48.9
CV			0	0	0	30.3	61.8	97.6

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: To evaluate longevity of POST herbicide treatments for orchard weed control.

TRIAL SUMMARY: At 120 days after treatment, the top treatment was Sinbar WDG at 2 lbs/A, with 96% or better control of 12 out of 13 weeds. The WDG formulation was by far superior to the WP formulation for grass control. Sinbar WP at 2 lbs/A, and Sinbar WP at 2 lbs/A + Roundup at 23.3 oz/A were next but were weaker on grasses.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 5/4/2010
Planned Completion Date: 10/15/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	AGRASS	annual grasses (various)	*Setaria, Digitaria* spp.
2	AMBEL	common ragweed	*Ambrosia artemisiifolia* L.
3	AMBTR	giant ragweed	*Ambrosia trifida* L.
4	CARHI	hairy bittercress	*Cardamine pratenis* L.
5	DAUCA	wild carrot	*Daucus carota* L.
6	OXAST	yellow woodsorrel	*Oxalis stricta* L.
7	PLALA	buckhorn plantain	*Plantago lanceolata* L.
8	POLPY	Pennsylvania smartweed	*Polygonum penslyvanicum* L.
9	RUMOB	broadleaf dock	*Rumex obtusifolius* L.
10	TAROF	dandelion	*Taraxacum officinale* Weber in Wiggers
11	TRFRE	white clover	*Trifolium repens* L.
12	ACCVI	Virginia copperleaf	*Acalypha virginica* L.
13	CYPES	yellow nutsedge	*Cyperus esculentes* L.

Crop 1: MABSD APPLE
Planting Date: 5/15/1998
In Row Spacing: 20 FT
Row Spacing: 20 FT
Soil Temperature: 64.8 F

Variety: Cortland

Planting Method: Conventional
Perennial Age: 12 YR
Soil Moisture: Normal

SITE AND DESIGN

Plot Width, Unit: 6 FT
Site Type: Orchard
Tillage Type: None

Plot Length, Unit: 15 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 16
% Silt: 72
% Clay: 12

% OM: 3
pH: 5.8
CEC: 14

Texture: Silt Loam
Soil Name: Wooster Silt Loam
Fert. Level: Moderate

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A
Application Date:	5/4/2010
Time of Day:	1-3 PM
Application Method:	Spray
Application Timing:	POST
Applic. Placement:	Broadcast
Air Temp., Unit:	68.9 F
% Relative Humidity:	49.2
Wind Velocity, Unit:	6 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	65 F
Soil Moisture:	Adequate
% Cloud Cover:	75

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	MABSD, POST
Stage Scale:	POST Bloom
Height, Unit:	20 FT

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AGRASS, POST
Stage Scale:	2-3"
Density, Unit:	Medium, Plot
Weed 2 Code, Stage:	AMBEL, POST
Stage Scale:	1-1.5"
Density, Unit:	High, Plot
Weed 3 Code, Stage:	AMBTR, POST
Stage Scale:	2.5"
Density, Unit:	Medium, Plot
Weed 4 Code, Stage:	CARHI, POST
Stage Scale:	4"
Density, Unit:	Medium, Plot
Weed 5 Code, Stage:	DAUCA, POST
Stage Scale:	1-1.5"
Density, Unit:	High, Plot
Weed 6 Code, Stage:	OXAST, POST
Stage Scale:	1"
Density, Unit:	Medium, Plot
Weed 7 Code, Stage:	PLALA, POST
Stage Scale:	2-2.5"
Density, Unit:	High, Plot
Weed 8 Code, Stage:	POLPY, POST
Stage Scale:	1"
Density, Unit:	High, Plot

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APPLES - WEED CONTROL AND CROP TOLERANCE WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed 9 Code, Stage:	RUMOB, POST
Stage Scale:	0.5-1"
Density, Unit:	Medium, Plot
Weed10 Code, Stage:	TAROF, POST
Stage Scale:	1-2"
Density, Unit:	Medium, Plot
Weed11 Code, Stage:	TRFRE, POST
Stage Scale:	0.5-2"
Density, Unit:	High, Plot
Weed12 Code, Stage:	ACCVI, POST
Stage Scale:	1-2"
Density, Unit:	Low, Plot
Weed13 Code, Stage:	CYPES, POST
Stage Scale:	None
Density, Unit:	None

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	Flat Fan
Nozzle Size:	XR8002 VS
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	5 FT
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Spray Volume, Unit:	25 GPA
Propellant:	CO2

TRIAL COMMENTS:

The trial objective was to see what treatment offered the best long-term weed control. Visual observations were taken at 30, 60, 90, and 120 days after application. The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100 = death of crop/ complete weed control.For weed density: Low= occasional weed ; Medium = 3 weeds per square foot ; High = > 3 weeds per square foot.

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					CARHI	DAUCA	TRFRE	RUMOB	OXAST	PLALA
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				TREE	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Rating Date				5/11/10	5/11/10	5/11/10	5/11/10	5/11/10	5/11/10	5/11/10
Trt-Eval Interval				7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT	7 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6	7
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	0	97	97	97	97	97	97
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	0	89	88	89	89	70	89
SINBAR WDG	2	lb/a	POST	0	93	88	93	93	78	93
SINBAR WP +	2	lb/a	POST	0	90	90	81	92	90	90
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	0	90	90	81	90	90	90
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	0	71	70	70	75	71	71
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	0	88	86	86	71	88	88
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	0	91	88	81	91	91	91
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	0	97	95	94	97	97	97
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				0	15.3	16.8	18	20.6	24.5	15.3
Standard Deviation				0	10.6	11.6	12.4	14.2	16.9	10.6
CV				0	13.11	14.65	16.05	17.87	21.88	13.11

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				AMBEL	AMBTR	POLPY		AGRASS	CARHI	DAUCA
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	TREE	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	INJURY	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Rating Date				5/11/10	5/11/10	5/11/10	5/25/10	5/25/10	5/25/10	5/25/10
Trt-Eval Interval				7 DAT	7 DAT	7 DAT	21 DAT	21 DAT	21 DAT	21 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	8	9	10	11	12	13	14
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	97	97	97	0	98	100	100
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	89	85	95	0	98	100	96
SINBAR WDG	2	lb/a	POST	92	89	98	0	98	100	96
SINBAR WP +	2	lb/a	POST	90	90	82	0	100	100	100
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	90	89	91	0	100	100	100
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	69	71	72	0	100	100	96
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	88	71	76	0	100	100	98
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	89	86	74	0	100	100	91
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	97	97	97	0	100	100	100
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				15.9	21.6	29.6	0	3.5	0.2	6.8
Standard Deviation				10.9	14.9	20.4	0	2.4	0.2	4.7
CV				13.67	19.16	26.09	0	2.71	0.18	5.36

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				TRFRE	RUMOB	OXAST	PLALA	AMBEL	AMBTR	POLPY
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Rating Date				5/25/10	5/25/10	5/25/10	5/25/10	5/25/10	5/25/10	5/25/10
Trt-Eval Interval				21 DAT	21 DAT	21 DAT	21 DAT	21 DAT	21 DAT	21 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	15	16	17	18	19	20	21
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	94	100	100	100	100	100	100
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	100	94	100	100	100	100	100
SINBAR WDG	2	lb/a	POST	96	94	100	100	100	100	100
SINBAR WP +	2	lb/a	POST	98	100	100	100	100	100	100
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	99	100	100	100	100	100	100
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	96	100	100	100	100	96	100
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	98	100	100	100	100	100	100
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	98	96	100	100	100	100	100
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	98	100	100	100	100	100	100
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				5.1	6.9	0	0	0	2.2	0
Standard Deviation				3.5	4.8	0	0	0	1.5	0
CV				4.06	5.38	0	0	0	1.69	0

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					AGRASS	CARHI	DAUCA	TRFRE	TAROF	RUMOB
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				TREE	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Rating Date				6/15/10	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10
Trt-Eval Interval				42 DAT	42 DAT	42 DAT	42 DAT	42 DAT	42 DAT	42 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	22	23	24	25	26	27	28
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	0	100	100	99	93	100	100
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	0	100	100	99	74	100	95
SINBAR WDG	2	lb/a	POST	0	100	100	100	100	100	96
SINBAR WP +	2	lb/a	POST	0	100	100	100	100	100	98
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	0	100	100	100	100	100	100
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	0	25	100	96	81	45	100
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	0	98	100	99	100	100	100
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	0	100	100	99	100	100	100
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	0	100	100	96	100	100	100
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				0	13.3	0	4.9	26.7	24.1	4.6
Standard Deviation				0	9.2	0	3.4	18.4	16.6	3.1
CV				0	11.14	0	3.79	21.73	19.68	3.54

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				OXAST	PLALA	AMBEL	AMBTR	POLPY	ACCVI	CYPES
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Rating Date				6/15/10	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10	6/15/10
Trt-Eval Interval				42 DAT	42 DAT	42 DAT	42 DAT	42 DAT	42 DAT	42 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	29	30	31	32	33	34	35
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	100	100	100	100	100	100	100
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	100	100	100	100	100	100	100
SINBAR WDG	2	lb/a	POST	99	100	100	100	100	100	100
SINBAR WP +	2	lb/a	POST	100	100	100	100	100	100	100
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	99	100	100	100	100	100	96
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	95	98	74	100	88	13	100
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	100	99	100	100	100	100	100
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	100	100	100	100	100	100	83
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	100	100	100	100	100	100	88
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				4.8	2.6	22.6	0	11.5	11.5	19.2
Standard Deviation				3.3	1.8	15.6	0	7.9	7.9	13.2
CV				3.7	2	17.81	0	8.91	9.73	15.25

The Ohio State University

APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					AGRASS	CARHI	DAUCA	TRFRE	TAROF	RUMOB
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				TREE	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	8/4/2010
Rating Unit				%	%	%	%	%	%	
Rating Date				8/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10
Trt-Eval Interval				90 DAT	90 DAT	90 DAT	90 DAT	90 DAT	90 DAT	90 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	36	37	38	39	40	41	42
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	0	93	100	91	86	99	99
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	0	95	100	100	100	94	95
SINBAR WDG	2	lb/a	POST	0	96	100	100	100	100	94
SINBAR WP +	2	lb/a	POST	0	89	100	100	100	100	98
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	0	96	100	100	100	96	96
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	0	25	50	45	50	25	50
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	0	90	100	90	100	98	100
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	0	94	100	98	100	100	100
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	0	98	100	93	100	94	99
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				0	28.5	26.5	27	29.3	23.7	26.4
Standard Deviation				0	19.6	18.3	18.6	20.2	16.3	18.2
CV				0	25.32	21.48	22.76	24.18	20.31	21.91

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				OXAST	PLALA	AMBEL	AMBTR	POLPY	ACCVI	CYPES
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Rating Date				8/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10	8/4/10
Trt-Eval Interval				90 DAT	90 DAT	90 DAT	90 DAT	90 DAT	90 DAT	90 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	43	44	45	46	47	48	49
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	95	100	100	100	100	99	100
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	100	100	100	100	100	100	100
SINBAR WDG	2	lb/a	POST	99	100	100	100	100	95	100
SINBAR WP +	2	lb/a	POST	99	100	100	100	100	86	100
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	95	100	100	100	100	89	46
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	20	50	50	75	73	0	50
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	96	98	99	100	100	95	100
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	95	98	98	100	100	89	50
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	94	100	100	100	100	99	95
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				19.9	26.3	26.4	22.9	22.3	16.9	42.8
Standard Deviation				13.7	18.1	18.2	15.8	15.4	11.6	29.5
CV				17.3	21.47	21.49	18.07	17.6	15.46	39.79

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					AGRASS	CARHI	DAUCA	TRFRE	TAROF	RUMOB
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				TREE	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	8/4/2010
Rating Unit				%	%	%	%	%	%	
Rating Date				9/4/10	9/4/10	9/4/10	9/4/10	9/4/10	9/4/10	9/4/10
Trt-Eval Interval				120 DAT	120 DAT	120 DAT	120 DAT	120 DAT	120 DAT	120 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	50	51	52	53	54	55	56
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	0	70	88	76	57	87	99
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	0	69	99	99	99	75	99
SINBAR WDG	2	lb/a	POST	0	97	99	99	99	99	99
SINBAR WP +	2	lb/a	POST	0	71	99	99	99	98	97
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	0	78	94	99	99	99	99
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	0	0	25	20	23	25	25
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	0	71	94	89	99	99	99
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	0	75	94	99	99	99	92
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	0	90	92	58	99	99	99
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				0	47.9	25	26.9	28	29.7	23.5
Standard Deviation				0	33	17.2	18.5	19.3	20.5	16.2
CV				0	53.26	21.93	25.13	25.02	26.27	20.04

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APPLES - WEED CONTROL AND CROP TOLERANCE
WITH TREEVIX AND SINBAR

Trial ID: APPWCCTTREEVSINB 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				OXAST	PLALA	AMBEL	AMBTR	POLPY	ACCVI	CYPES
Crop Code				APPLE	APPLE	APPLE	APPLE	APPLE	APPLE	APPLE
Part Rated				WEED	WEED	WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%	%
Rating Date				9/4/10	9/4/10	9/4/10	9/4/10	9/4/10	9/4/10	9/4/10
Trt-Eval Interval				120 DAT	120 DAT	120 DAT	120 DAT	120 DAT	120 DAT	120 DAT
# Subsamples, Dec.				0	0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	57	58	59	60	61	62	63
UNTREATED CONTROL				0	0	0	0	0	0	0
TREEVIX+	1	oz/a	POST	30	99	99	99	99	50	99
PROWL H2O+	3	qt/a								
ROUNDUP W/M+	23.3	oz/a								
MSO+	1	qt/a								
AMS	43.5	lb/a								
SINBAR WP	2	lb/a	POST	95	99	99	99	99	99	99
SINBAR WDG	2	lb/a	POST	77	96	99	99	99	99	99
SINBAR WP +	2	lb/a	POST	78	99	99	99	99	99	99
ROUNDUP W/M	23.3	oz/a								
SINBAR WDG +	2	lb/a	POST	60	99	99	99	99	99	60
ROUNDUP W/M	23.3	oz/a								
ROUNDUP W/M	23.3	oz/a	POST	20	23	50	50	50	50	50
MATRIX+	4	oz/a								
KARMEX+	3	lb/a								
ROUNDUP W/M+	23.3	oz/a	POST	69	95	99	99	99	99	99
NIS	0.25	qt/a								
KARMEX+	3	lb/a	POST	51	95	99	99	99	99	99
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
CHATEAU+	12	oz/a	POST	66	99	99	99	99	99	79
ROUNDUP W/M+	23.3	oz/a								
NIS	0.25	qt/a								
LSD (P=.05)				45.9	21.5	26.2	26.2	26.2	37.1	35
Standard Deviation				31.7	14.8	18.1	18.1	18.1	25.6	24.1
CV				57.99	18.52	21.48	21.48	21.48	32.27	30.81

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BROCOLLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: Evaluate effect of 2, 4-D and dicamba simulated drift on processing brocolli.

TRIAL SUMMARY: All rates of 2, 4-D, dicamba, and the tank-mix of 2, 4-D with glyphosate injured brocolli. However, the crop recovered quickly except from the 1X rate of 2, 4-D. Dicamba reduced yield even though injury symptoms were no more severe than with 2, 4-D.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 6/21/2010
Planned Completion Date: 11/18/2010

CROP DESCRIPTION

Crop 1: BRSOK Brocolli
Planting Date: 6/21/2010
Rate: 1 Plant/24"
Row Spacing: 5 FT
Seed Bed: Conventional

Variety: Avenger
Planting Method: Machine Transplanted
Depth: 2 IN
Spacing Within Row: 24 IN
Soil Moisture: Moist

SITE AND DESIGN

Plot Width, Unit: 3 FT
Site Type: Level Well Drained
Tillage Type: Moldboard Plow

Plot Length, Unit: 25 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 16	% OM: 3.11	Texture: Silt Loam
% Silt: 72	pH: 6.7	Soil Name: Wooster Silt Loam
% Clay: 12	CEC: 8.5	Fert. Level: Moderate

APPLICATION DESCRIPTION

	A
Application Date:	7/13/2010
Time of Day:	10-11 AM
Application Method:	Spray
Application Timing:	POST3WATP
Applic. Placement:	Broadcast
Air Temp., Unit:	78.5 F
% Relative Humidity:	85.8
Wind Velocity, Unit:	2 MPH
Dew Presence (Y/N):	N
Soil Moisture:	Moist
% Cloud Cover:	30

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BROCOLLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	BRSOK POST
Stage Scale:	8 Leaf Stage
Height, Unit:	5 IN

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	Flat Fan
Nozzle Size:	80015VS
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	2
Band Width, Unit:	36 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.3 MPH
Spray Volume, Unit:	15 GPA
Propellant:	CO2

TRIAL COMMENTS:

Five consecutive plants per plot were selected for measurements and yield. Plant heights were taken in centimeters from the soil line to the growing tip inside the new leaves at 7, 14, and 28 days after treatment. The entire trial was harvested on 9/9/10, based on the visual maturity of the control plants. We took 2 diagonal measurements per head in centimeters; (Columns: 32,33, 36, 37, 40, 41, 44, 45, 48,49). The heads were graded according to the United States Department of Agriculture, "United States Standards for Grades of Broccoli for Processing.

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BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	INJURY	NECROSIS
	Rating Unit				%	%	%	%	%
	Rating Date				7/16/10	7/16/10	7/16/10	7/16/10	7/20/10
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	0	100	80	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	0	13	18	0
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	0	14	14	0
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	0	11	11	0
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	0	11	8	0
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	0	0	4	9	0
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	0	9	8	0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	0	18	13	0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	0	14	14	0
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	0	9	9	0
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	0	4	5	0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	0	18	15	0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	0	13	11	0
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	0	9	8	0
15	UNTREATED CONTROL				0	0	0	0	0
	LSD (P=.05)				0	0	5	5	0
	Standard Deviation				0	0	4	3	0
	CV				0	0	22	23	0

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BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	BRSOK PLANT CHLOROSIS % 7/20/10 7 DAT 0	BRSOK PLANT EPINASTY % 7/20/10 7 DAT 0	BRSOK PLANT INJURY % 7/20/10 7 DAT 0	BRSOK PLANT1 HEIGHT CM 7/20/10 7 DAT 1	BRSOK PLANT2 HEIGHT CM 7/20/10 7 DAT 1
					6	7	8	9	10
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	38	100	100	9.7	8.0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	23	23	9.9	10.5
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	16	16	11.4	10.8
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	11	8	10.5	9.9
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	0	0	10.5	10.3
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	0	3	3	9.1	9.4
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	3	3	11.8	10.0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	0	0	9.6	9.4
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	0	0	9.4	9.3
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	0	0	11.0	11.0
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	0	4	9.4	9.8
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	0	8	10.1	10.1
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	0	0	11.0	12.0
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	0	10	9.6	10.4
15	UNTREATED CONTROL				0	0	0	10.5	11.4
LSD (P=.05)					9	6	11	2.8	2.8
Standard Deviation					7	5	8	1.9	2.0
CV					258	44	65	18.9	19.6

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BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	11	12	13	14	15
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT3	PLANT4	PLANT5	PLANT	PLANT
	Rating Data Type				HEIGHT	HEIGHT	HEIGHT	NECROSIS	CHLOROSIS
	Rating Unit				CM	CM	CM	%	%
	Rating Date				7/20/10	7/20/10	7/20/10	7/27/10	7/27/10
	Trt-Eval Interval				7 DAT	7 DAT	7 DAT	14 DAT	14 DAT
	# Subsamples, Dec.				1	1	1	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	9.2	9.3	10.4	70	30
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	9.9	10.6	9.1	0	0
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	10.8	11.3	12.0	0	0
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	9.7	11.1	11.1	0	0
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	10.8	11.1	12.9	0	0
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	9.1	10.7	10.3	0	0
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	10.8	9.4	10.4	0	0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	9.3	10.1	9.8	0	0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	10.4	10.4	10.0	0	0
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	10.6	10.7	10.5	0	0
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	9.4	10.4	10.5	0	0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	9.2	10.3	10.3	0	0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	11.3	10.4	9.2	0	0
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	8.7	10.5	11.4	0	0
15	UNTREATED CONTROL				12.1	11.1	9.8	0	0
	LSD (P=.05)				3.2	2.4	2.5	17	0
	Standard Deviation				2.3	1.7	1.8	12	0
	CV				22.3	15.9	16.7	259	0

The Ohio State University

BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	16	17	18	19	20
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT	PLANT	PLANT1	PLANT2	PLANT3
	Rating Data Type				EPINASTY	INJURY	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				%	%	CM	CM	CM
	Rating Date				7/27/10	7/27/10	7/27/10	7/27/10	7/27/10
	Trt-Eval Interval				14 DAT	14 DAT	14 DAT	14 DAT	14 DAT
	# Subsamples, Dec.				0	0	1	1	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	100	98	8.9	8.0	8.6
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	6	12.7	13.8	14.0
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	0	14.5	14.0	14.2
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	0	15.1	13.7	14.8
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	3	13.5	14.8	14.7
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	3	0	12.9	13.2	12.0
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	5	13.0	13.1	14.3
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	0	13.5	12.8	12.7
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	0	12.9	12.4	13.3
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	3	13.6	14.9	15.3
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	5	13.0	12.6	13.0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	3	13.5	13.8	12.7
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	0	14.6	15.4	14.9
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	5	13.7	13.7	13.2
15	UNTREATED CONTROL				0	0	13.9	15.1	13.3
	LSD (P=.05)				2	7	3.0	3.0	3.1
	Standard Deviation				1	5	2.1	2.1	2.2
	CV				19	59	16.0	15.5	16.3

The Ohio State University

BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	21	22	23	24	25
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT4	PLANT5	PLANT	PLANT	PLANT
	Rating Data Type				HEIGHT	HEIGHT	NECROSIS	CHLOROSIS	EPINASTY
	Rating Unit				CM	CM	%	%	%
	Rating Date				7/27/10	7/27/10	8/3/10	8/3/10	8/3/10
	Trt-Eval Interval				14 DAT	14 DAT	21 DAT	21 DAT	21 DAT
	# Subsamples, Dec.				1	1	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	9.1	9.4	98	98	100
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	14.3	13.4	0	0	0
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	14.7	14.5	0	0	0
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	15.5	15.9	0	0	0
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	15.8	15.1	0	0	0
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	14.2	14.0	0	0	0
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	13.4	14.5	0	0	0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	13.3	13.8	0	0	0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	15.0	13.5	0	0	0
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	15.1	15.2	0	0	0
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	12.9	15.4	0	0	0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	14.3	14.9	0	0	0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	15.0	15.9	0	0	0
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	13.8	14.8	0	0	0
15	UNTREATED CONTROL				14.4	14.6	0	0	0
	LSD (P=.05)				3.1	3.1	1	1	0
	Standard Deviation				2.1	2.1	1	1	0
	CV				15.2	14.9	9	9	0

The Ohio State University

BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	26	27	28	29	30
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT	PLANT1	PLANT2	PLANT3	PLANT4
	Rating Data Type				INJURY	HEIGHT	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				%	CM	CM	CM	CM
	Rating Date				8/3/10	8/10/10	8/10/10	8/10/10	8/10/10
	Trt-Eval Interval				21 DAT	28 DAT	28 DAT	28 DAT	28 DAT
	# Subsamples, Dec.				0	1	1	1	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	100	7.4	6.4	7.5	7.6
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	19.4	21.9	21.3	21.3
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	22.4	22.8	21.1	21.6
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	22.9	21.5	23.5	22.6
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	20.3	21.3	22.6	23.8
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	0	21.1	19.1	18.1	21.3
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	19.9	19.2	20.1	19.6
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	20.5	20.0	19.0	19.5
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	18.0	18.8	19.5	20.4
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	21.9	22.5	22.9	20.8
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	19.1	19.1	20.4	20.6
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	20.3	20.3	19.6	22.0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	20.9	22.5	18.6	23.5
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	21.0	20.8	19.6	20.4
15	UNTREATED CONTROL				0	19.8	21.6	20.6	20.5
	LSD (P=.05)				0	4.2	4.6	3.8	3.8
	Standard Deviation				0	2.9	3.2	2.6	2.6
	CV				0	15	16	13	13

The Ohio State University

BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	31	32	33	34	35
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT5	PLANT1	PLANT1	PLANT1	PLANT1
	Rating Data Type				HEIGHT	HEAD DIAM	HEAD DIAM	GRADE	WEIGHT
	Rating Unit				CM	CM	CM	NUMBER	GRAMS
	Rating Date				8/10/10	9/9/10	9/9/10	9/9/10	9/9/10
	Trt-Eval Interval				28 DAT	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	1	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	8.8	0.8	0.8	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	19.9	7.3	8.1	1	143.3
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	20.9	15.8	15.5	1	602.0
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	20.9	10.9	11.0	1	444.5
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	22.1	14.8	15.5	1	552.5
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	20.5	11.8	13.1	1	515.5
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	20.0	10.4	10.5	1	345.5
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	21.1	8.9	8.6	1	220.3
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	18.9	8.4	8.6	1	148.0
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	22.5	10.6	10.1	1	283.3
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	22.3	8.8	9.3	1	192.5
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	24.1	10.1	11.1	1	350.0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	24.4	13.5	11.9	1	434.3
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	22.0	11.3	11.5	1	325.8
15	UNTREATED CONTROL				21.9	12.6	14.5	1	545.0
	LSD (P=.05)				4.0	6.7	7.3	0	392.7
	Standard Deviation				2.8	4.7	5.1	0	274.8
	CV				14	45.4	47.6	0	80.8

The Ohio State University

BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	36	37	38	39
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT2	PLANT2	PLANT2	PLANT2
	Rating Data Type				HEAD DIAM	HEAD DIAM	GRADE	WEIGHT
	Rating Unit				CM	CM	NUMBER	GRAMS
	Rating Date				9/9/10	9/9/10	9/9/10	9/9/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0.8	0.8	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	13.3	14.0	1	562.3
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	15.9	15.9	1	651.8
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	11.5	12.9	1	346.0
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	13.0	13.1	1	584.3
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	7.5	8.8	1	222.8
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	11.3	10.8	1	483.5
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	85.0	9.4	1	307.0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	3.3	3.9	1	28.5
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	9.8	8.8	1	288.8
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	8.3	9.3	1	214.3
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	8.3	7.9	1	259.0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	10.8	11.0	1	432.0
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	10.9	13.4	1	506.3
15	UNTREATED CONTROL				12.5	14.4	1	515.0
	LSD (P=.05)				54.9	9.3	0	507.0
	Standard Deviation				38.4	6.5	0	354.7
	CV				259.8	63.2	0	98.5

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BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	40	41	42	43
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT3	PLANT3	PLANT3	PLANT3
	Rating Data Type				HEAD DIAM	HEAD DIAM	GRADE	WEIGHT
	Rating Unit				CM	CM	NUMBER	GRAMS
	Rating Date				9/9/10	9/9/10	9/9/10	9/9/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	0	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	11.5	11.0	1	504.5
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	14.3	15.3	1	611.5
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	14.1	12.3	1	481.0
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	15.0	16.0	1	814.8
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	6.5	8.0	1	190.0
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	11.6	12.4	1	520.8
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	6.4	5.5	1	152.5
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	11.1	11.0	1	339.3
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	9.1	9.5	1	299.5
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	11.0	11.8	1	396.5
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	6.5	5.5	1	203.8
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	6.9	7.0	1	174.3
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	7.6	7.6	1	236.0
15	UNTREATED CONTROL				17.3	17.3	1	791.5
	LSD (P=.05)				8.1	8.3	0	490.1
	Standard Deviation				5.7	5.8	0	342.9
	CV				56.9	58.2	0	90.0

The Ohio State University

BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	44	45	46	47
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT4	PLANT4	PLANT4	PLANT4
	Rating Data Type				HEAD DIAM	HEAD DIAM	GRADE	WEIGHT
	Rating Unit				CM	CM	NUMBER	GRAMS
	Rating Date				9/9/10	9/9/10	9/9/10	9/9/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	0	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	9.6	10.5	1	85.5
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	11.0	11.6	1	505.5
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	13.3	13.1	1	475.8
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	19.0	21.3	1	993.8
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	11.9	12.6	1	391.3
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	8.0	9.1	1	273.0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	7.4	7.3	1	327.5
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	12.8	10.6	1	346.0
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	9.8	11.3	1	380.5
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	7.1	8.4	1	207.0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	12.8	11.6	1	473.8
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	13.0	12.3	1	429.3
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	9.6	9.3	1	372.5
15	UNTREATED CONTROL				15.8	16.1	1	629.3
	LSD (P=.05)				8.8	8.9	0	560.0
	Standard Deviation				6.1	6.2	0	391.9
	CV				57	57	0	99.8

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BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	48	49	50	51
	Crop Code				BRSOK	BRSOK	BRSOK	BRSOK
	Part Rated				PLANT5	PLANT5	PLANT5	PLANT5
	Rating Data Type				HEAD DIAM	HEAD DIAM	GRADE	WEIGHT
	Rating Unit				CM	CM	NUMBER	GRAMS
	Rating Date				9/9/10	9/9/10	9/9/10	9/9/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	0	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	3.6	4.4	1	340.3
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	13.9	14.8	1	755.3
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	15.0	14.8	1	592.3
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	9.3	11.5	1	534.5
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	8.3	8.4	1	289.0
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	11.4	12.0	1	447.0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	10.5	9.9	1	210.0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	8.4	8.3	1	178.5
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	13.8	14.5	1	677.8
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	12.0	11.6	1	336.0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	14.5	15.0	1	616.3
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	14.4	16.0	1	635.5
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	7.8	7.1	1	258.5
15	UNTREATED CONTROL				18.3	18.4	1	847.0
	LSD (P=.05)				7.8	7.9	0	542.3
	Standard Deviation				5.5	5.5	0	379.5
	CV				50.9	49.6	0	84.7

The Ohio State University

BROCCOLI- EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: BROCHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	52	53	54
	Crop Code				BRSOK	BRSOK	BRSOK
	Part Rated				HEAD	HEAD	HEAD
	Rating Data Type				TOTAL	TOTAL	AVERAGE
	Rating Unit				NUMBER	GRAMS	GRAMS
	Rating Date				9/9/10	9/9/10	9/9/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				0	1	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	5	1635.8	327.2
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	5	3126.0	625.2
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	5	2339.5	467.9
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	5	3479.8	696.0
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	5	1608.5	321.7
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	5	2069.8	414.0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	5	1217.3	243.5
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	5	1040.3	208.1
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	5	1929.8	386.0
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	5	1346.3	269.3
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	5	1902.8	380.6
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	5	2105.3	421.1
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	5	1699.0	339.8
15	UNTREATED CONTROL				5	3327.8	665.6
	LSD (P=.05)				0	1842.1	368.4
	Standard Deviation				0	1289.0	257.8
	CV				0	67.1	67.1

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CAULIFLOWER - WEED CONTROL AND CROP TOLERANCE WITH PENDIMETHALIN
IR-4 PR.NO: P6504

Trial ID: CAULWCCTPENDIF 2010
Location: Fremont

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: IR-4 has received a request for the minor use of Prowl H2O on cauliflower (06504) for control of weeds. The purpose of this research is to collect performance data to support pesticide registration according to parameters outlined in the request.

TRIAL SUMMARY: Prowl H2O and Dual Magnum caused moderate but transient crop injury and did not affect crop yield parameters. Prowl H2O provided slightly better weed control than Dual Magnum.

TRIAL LOCATION

City: Fremont
State/Prov.: Ohio
Postal Code: 43420
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 5/27/2010
Planned Completion Date: 8/24/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
	1 AGRASS	foxtail, crabgrass, spp.	*Setaria, Digitaria spp.*
	2 AMABL	Prostrate pigweed	*Amaranthus blitoides*
	3 CHEAL	common lambsquarter	*Chenopodium album L.*
	4 POLPY	Pennsylvania smartweed	*Polygonum pensylvanicum L.*
	5 POROL	common purslane	*Portulaca oleracea L.*
	6 SOLPT	black nightshade	*So9lanum ptycanthum Dun.*

Crop 1: BRSOB Cauliflower
Planting Date: 5/25/2010
Rate: 1 P/Row-FT
Row Spacing: 5 FT
Seed Bed: Smooth

Variety: Flamenco
Planting Method: Transplanted - Machine
Depth: 1.5 IN
Spacing Within Row: 18 IN
Soil Moisture: Normal

SITE AND DESIGN

Plot Width, Unit: 5 FT
Site Type: Level Field
Tillage Type: Conventional - Till

Plot Length, Unit: 25 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 50
% Silt: 40
% Clay: 10

% OM: 2.5
pH: 7.0
CEC: 9.3

Texture: Loamy fine sand
Soil Name: Rimer
Fert. Level: Moderate

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CAULIFLOWER - WEED CONTROL AND CROP TOLERANCE WITH PENDIMETHALIN
IR-4 PR.NO: P6504

Trial ID: CAULWCCTPENDIF 2010
Location: Fremont

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A
Application Date:	5/27/2010
Time of Day:	1030-11AM
Application Method:	Spray
Application Timing:	POSTTR
Applic. Placement:	Broadcast
Air Temp., Unit:	82.9 F
% Relative Humidity:	55.37
Wind Velocity, Unit:	4.7 MPH
Dew Presence (Y/N):	N
Soil Temp., Unit:	71.5 F
Soil Moisture:	Dry
% Cloud Cover:	30

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	BRSOB
Stage Scale:	4 Leaf Stage
Height, Unit:	2.5 IN

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AGRASS, Post Transplant
Stage Scale:	None
Height, Unit:	None
Weed 1 Code, Stage:	AMABL, Post Transplant
Stage Scale:	None
Height, Unit:	None
Weed 1 Code, Stage:	CHEAL, Post Transplant
Stage Scale:	None
Height, Unit:	None
Weed 1 Code, Stage:	POLPY, Post Transplant
Stage Scale:	None
Height, Unit:	None
Weed 1 Code, Stage:	POROL, Post Transplant
Stage Scale:	None
Height, Unit:	None
Weed 1 Code, Stage:	SOLPT, Post Transplant
Stage Scale:	None
Height, Unit:	None

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CAULIFLOWER - WEED CONTROL AND CROP TOLERANCE WITH PENDIMETHALIN
IR-4 PR.NO: P6504

Trial ID: CAULWCCTPENDIF 2010
Location: Fremont

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	XRTEEJET
Nozzle Size:	8002VS
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	2
Band Width, Unit:	36 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	2.65 MPH
Spray Volume, Unit:	25 GPA
Propellant:	CO2

TRIAL COMMENTS

"Flamenco" was the processing cauliflower variety used in this trial with a 102 day maturity. Plants were greenhouse grown and transplanted to the field on 5/ 5/10. Herbicide treatments were applied by hand on 5/27/10 2 days after transplanting. Visual injury ratings (necrosis, chlorosis, epinasty) were taken on a 0-100 scale, with"0" representing no injury, and "100" representing crop death. Ratings were taken at 3, 7, 14, and 21 days after treatment. For weed density: LOW = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot. The entire trial was harvested on 8/24/10 based on the visual maturity of the control plants. Cauliflower heads were measured in centimeters (CM), and weighed in pounds. Grades were based on the USDA "United States Standards for Grades of Cauliflower", and were: U.S # 1, (Grade #1); U.S Commercial, (Grade #2); and Unclassified, (Grade #3).

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CAULIFLOWER - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO.: P6504

Trial ID: CAULWCCTPENDIF 2010
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
	Weed Code									
	Crop Code				BRSOB	BRSOB	BRSOB	BRSOB	BRSOB	BRSOB
	Part Rated				LEAF	PLANT	PLANT	STAND	LEAF	LEAF
	Rating Data Type				BURN	CHLOROSIS	STUNT	LOSS	BURN	CLOROSIS
	Rating Unit				%	%	%	%	%	%
	Rating Date				6/3/10	6/3/10	6/3/10	6/3/10	6/10/10	6/10/10
	Trt-Eval Interval				1 WAT	1 WAT	1 WAT	1 WAT	2 WAT	2WAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	UNTREATED CONTROL				5	0	0	0	0	0
2	WEED FREE CONTROL				5	0	0	0	0	0
3	PROWL H2O	1.05	qt/a	POST	5	0	0	0	0	0
4	PROWL H2O	2.1	qt/a	POST	5	0	0	0	0	0
5	DUAL MAGNUM	0.33	qt/a	POST	5	0	9	0	0	0
6	DUAL MAGNUM	0.66	qt/a	POST	5	0	0	0	0	0
	LSD (P=.05)				0.0	0.0	10.8	0.0	0.0	0.0
	Standard Deviation				0.0	0.0	7.1	0.0	0.0	0.0
	CV				0.0	0.0	489.9	0.0	0.0	0.0

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CAULIFLOWER - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO.: P6504

Trial ID: CAULWCCTPENDIF 2010
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11	12
	Weed Code									AGRASS
	Crop Code				BRSOB	BRSOB	BRSOB	BRSOB	BRSOB	BRSOB
	Part Rated				PLANT	STAND	LEAF	PLANT	STAND	WEED
	Rating Data Type				STUNT	LOSS	BURN	STUNT	LOSS	CONTROL
	Rating Unit				%	%	%	%	%	%
	Rating Date				6/10/10	6/10/10	6/24/10	6/24/10	6/24/10	6/24/10
	Trt-Eval Interval				2 WAT	2 WAT	4 WAT	4 WAT	4 WAT	4 WAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	UNTREATED CONTROL				6	0	0	0	0	0
2	WEED FREE CONTROL				0	0	0	0	0	100
3	PROWL H2O	1.05	qt/a	POST	13	0	0	0	0	34
4	PROWL H2O	2.1	qt/a	POST	20	0	0	0	0	33
5	DUAL MAGNUM	0.33	qt/a	POST	20	0	0	8	0	36
6	DUAL MAGNUM	0.66	qt/a	POST	14	0	0	0	0	19
	LSD (P=.05)				16.1	0.0	0.0	9.2	0.0	34.5
	Standard Deviation				10.7	0.0	0.0	6.1	0.0	22.9
	CV				88.3	0.0	0.0	489.9	0.0	62.1

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CAULIFLOWER - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO.: P6504

Trial ID: CAULWCCTPENDIF 2010
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15	16	17	18
	Weed Code				SOLPT	POROL	AMABL	CHEAL	POLPY	
	Crop Code				BRSOB	BRSOB	BRSOB	BRSOB	BRSOB	BRSOB
	Part Rated				WEED	WEED	WEED	WEED	WEED	PLANT
	Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	STUNT
	Rating Unit				%	%	%	%	%	%
	Rating Date				6/24/10	6/24/10	6/24/10	6/24/10	6/24/10	7/15/10
	Trt-Eval Interval				4 WAT	4 WAT	4WAT	4WAT	4WAT	7 WAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	UNTREATED CONTROL				0	0	0	0	0	0
2	WEED FREE CONTROL				75	100	100	100	100	0
3	PROWL H2O	1.05	qt/a	POST	93	15	38	63	100	0
4	PROWL H2O	2.1	qt/a	POST	50	48	65	75	50	0
5	DUAL MAGNUM	0.33	qt/a	POST	28	40	58	55	75	0
6	DUAL MAGNUM	0.66	qt/a	POST	25	35	50	50	25	0
	LSD (P=.05)				60.1	25.2	63.3	64.4	50.2	0.0
	Standard Deviation				39.9	16.7	42.0	42.7	33.3	0.0
	CV				88.6	42.2	81.3	74.9	57.1	0.0

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CAULIFLOWER - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO.: P6504

Trial ID: CAULWCCTPENDIF 2010
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	19	20	21
	Weed Code						
	Crop Code				BRSOB	BRSOB	BRSOB
	Part Rated				HEAD	HEAD	HEAD
	Rating Data Type				TOTAL	TOTAL WT	AVE WT
	Rating Unit				NO/PLOT	LBS/PLOT	LBS
	Rating Date				8/25/10	8/25/10	8/25/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	1
1	UNTREATED CONTROL				11	20.2	1.8
2	WEED FREE CONTROL				12	30.2	2.5
3	PROWL H2O	1.05	qt/a	POST	13	26.2	2
4	PROWL H2O	2.1	qt/a	POST	12	28.8	2.3
5	DUAL MAGNUM	0.33	qt/a	POST	12	21.8	1.9
6	DUAL MAGNUM	0.66	qt/a	POST	14	29.3	2
	LSD (P=.05)				4.2	9.4	0.8
	Standard Deviation				2.8	6.2	0.5
	CV				22.6	23.9	23.5

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GREEN ONIONS - MARSH YELLOWCRESS CONTROL

Trial ID: GONIONMARYELLO 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: Evaluating promising marsh yellowcress control treatments for potential use in green onions.

TRIAL SUMMARY: Results indicate that Sencor at 0.25-0.50 lb/A had the best marsh yellowcress control with low crop injury in green onions. Other potential treatments include Lorox at 2 lb/A, and Chateau at 2 oz/A. This years' trial had excellent weed pressure, but no irrigation source; consequently the green onion stand was erratic.

TRIAL LOCATION

City: Willard
State/Prov.: Ohio
Postal Code: 44890
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 7/21/2010
Planned Completion Date: 10/30/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	RORIS	Marsh yellowcress	*Rorippa islandica*

Crop 1: ALLCE Onion, Green
Planting Date: 7/21/2010
Rate: 11 Seeds/FT
Row Spacing: 5 FT
Soil Temperature: 74.6 F
Seed Bed: Smooth

Variety: Tokyo Long White
Planting Method: Seeded
Depth: 0.5 IN
Spacing Within Row: 1.1 IN
Soil Moisture: Normal
Emergence Date: 7/30/10

SITE AND DESIGN

Plot Width, Unit: 5 FT
Site Type: Level Field
Tillage Type: Conventional

Plot Length, Unit: 20 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 64
% Silt: 31
% Clay: 5

% OM: 47.9
pH: 5.4
CEC: 70.3

Texture: Muck
Soil Name: Linwood Muck
Fert. Level: High

APPLICATION DESCRIPTION

	A
Application Date:	7/23/2010
Time of Day:	9:40 AM
Application Method:	Spray
Application Timing:	PRE
Applic. Placement:	Broadcast
Air Temp., Unit:	86.4
% Relative Humidity:	73.1
Wind Velocity, Unit:	6 MPH

The Ohio State University

GREEN ONIONS - MARSH YELLOWCRESS CONTROL

Trial ID: GONIONMARYELLO 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Dew Presence (Y/N):	N
Soil Moisture:	Dry
% Cloud Cover:	30

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	ALLCE, PRE
Height, Unit:	None

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	RORIS, PRE
Height, Unit:	None

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	Flat Fan
Nozzle Size:	8002VS
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	60 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.2 MPH
Carrier:	H2O
Spray Volume, Unit:	25 GPA
Propellant:	CO2

TRIAL COMMENTS:

This trial had high marsh yellowcress pressure but did not have irrigation potential, consequently the onion stand was erratic and no harvest was taken. It was possible, however to find similarities among treatments to get an idea of what the best potential treatments for onions would be. We hope to continue this trial on an irrigated site next year.

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GREEN ONIONS - MARSH YELLOWCRESS CONTROL

Trial ID: GONIONMARYELLO 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	6
	Weed Code					RORIS		RORIS	
	Crop Code				ALLCE	ALLCE	ALLCE	ALLCE	ALLCE
	Part Rated				PLANT	WEED	PLANT	WEED	PLANT
	Rating Data Type				EMERGENCE	CONTROL	EMERGENCE	CONTROL	INJURY
	Rating Unit				%	%	%	%	%
	Rating Date				7/29/10	7/29/10	8/4/10	8/4/10	8/11/10
	Trt-Eval Interval				1WAT	1WAT	2WAT	2WAT	3WAT
	# Subsamples, Dec.				0	0	0	0	0
1	UNTREATED CONTROL				73	0	83	0	0
2	OUTLOOK	21	fl oz/a	PRE	43	94	74	66	0
3	SANDEA	0.25	oz/a	PRE	53	85	71	69	35
4	SANDEA	0.5	oz/a	PRE	24	93	68	80	50
5	SANDEA	0.75	oz/a	PRE	21	94	65	80	46
6	SANDEA	1	oz/a	PRE	16	93	64	83	65
7	SENCOR	0.25	lb/a	PRE	74	74	83	90	0
8	SENCOR	0.5	lb/a	PRE	66	95	86	93	3
9	SENCOR	0.75	lb/a	PRE	81	93	80	93	3
10	SENCOR	1	lb/a	PRE	88	99	79	93	3
11	LOROX	2	lb/a	PRE	74	70	83	81	0
12	LOROX	3	lb/a	PRE	74	70	80	85	3
13	CHATEAU	1	oz/a	PRE	83	85	80	65	0
14	CHATEAU	2	oz/a	PRE	51	96	69	79	0
15	CHATEAU	3	oz/a	PRE	41	99	49	88	9
	LSD (P=.05)				34.5	12.7	13.2	6.8	13.9
	Standard Deviation				24.1	8.9	9.3	4.8	9.7
	CV				42.1	10.8	12.5	6.3	67.8

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GREEN ONIONS - MARSH YELLOWCRESS CONTROL

Trial ID: GONIONMARYELLO 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	RORIS ALLCE WEED CONTROL % 8/11/10 3WAT 0 7	ALLCE PLANT INJURY % 8/20/10 4WAT 0 9	RORIS ALLCE WEED CONTROL % 9/9/10 6WAT 0 10	ALLCE PLANT INJURY % 9/9/10 6WAT 0 11
1	UNTREATED CONTROL				0	0	0	0
2	OUTLOOK	21	fl oz/a	PRE	54	0	53	20
3	SANDEA	0.25	oz/a	PRE	66	13	46	43
4	SANDEA	0.5	oz/a	PRE	80	58	69	66
5	SANDEA	0.75	oz/a	PRE	81	70	66	79
6	SANDEA	1	oz/a	PRE	84	78	80	88
7	SENCOR	0.25	lb/a	PRE	81	0	73	19
8	SENCOR	0.5	lb/a	PRE	89	6	84	43
9	SENCOR	0.75	lb/a	PRE	90	24	89	66
10	SENCOR	1	lb/a	PRE	91	39	94	75
11	LOROX	2	lb/a	PRE	71	3	53	13
12	LOROX	3	lb/a	PRE	76	8	53	31
13	CHATEAU	1	oz/a	PRE	46	0	5	15
14	CHATEAU	2	oz/a	PRE	65	11	53	48
15	CHATEAU	3	oz/a	PRE	74	43	66	73
LSD (P=.05)					9.4	12.3	8.9	12.1
Standard Deviation					6.6	8.6	6.2	8.5
CV					9.5	36.8	10.6	18.7

The Ohio State University

GREEN ONIONS - WEED CONTROL AND CROP TOLERANCE WITH PENDIMETHALIN
IR-4 PR. NO. : P5097

Trial ID: GRONWCCTPENDIM 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: IR-4 has received a request for the minor use of pendimethalin on green onions for control of weeds. The purpose of this research is to collect phytotoxicity data to support registration according to parameters outlined in the request.

TRIAL SUMMARY: Green onions were not injured by Prowl H2O and provided better yield than the untreated control except when used at the lowest rate of 1.05 qt/A. The split-application of Prowl H2O provided the best overall weed control and the highest total yield and average weight per plant.

TRIAL LOCATION

City: Willard
State/Prov.: Ohio
Postal Code: 44890
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 8/12/2010
Planned Completion Date: 11/30/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	POROL	Common purslane	*Portulaca oleracea*
2	AMABL	Prostrate pigweed	*Amaranthus blitoides*

Crop 1: ALLCE Onion, Green Bunching
Planting Date: 8/12/2010
Rate: 11 S/Row-FT
Row Spacing: 5 FT
Seed Bed: Smooth
Emergence Date: 8/19/2010

Variety: Tokyo Long White
Seed Company: Siegers'
Lot No: 660039
Planting Method: Drilled
Depth: 0.25 IN
Spacing Within Row: 1 IN
Soil Moisture: Dry

SITE AND DESIGN

Plot Width, Unit: 5 FT
Site Type: Field
Tillage Type: Conventional-Till

Plot Length, Unit: 25 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 64
% Silt: 31
% Clay: 5

% OM: 47.9
pH: 5.4
CEC: 70.3

Texture: Muck
Soil Name: Linwood Muck
Fert. Level: Excellent

The Ohio State University

GREEN ONIONS - WEED CONTROL AND CROP TOLERANCE WITH PENDIMETHALIN
IR-4 PR. NO. : P5097

Trial ID: GRONWCCTPENDIM 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A	B
Application Date:	8/12/2010	9/9/2010
Time of Day:	1-2 PM	10-11 AM
Application Method:	Spray	Spray
Application Timing:	PRE	POST 2-3
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	82.4 F	59.0 F
% Relative Humidity:	69.4	76.2
Wind Velocity, Unit:	8.7 MPH	3.5 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	87.2 F	64.4 F
Soil Moisture:	Dry	Dry

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ALLCE, PRE	ALLCE, POST
Stage Scale:	None	2-3 Leaf Stage
Height, Unit:	0 IN	6 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	POROL, PRE	POROL, POST
Stage Scale:	None	6" Diameter
Density, Unit:	None	High, Plot
Weed 2 Code, Stage:	AMABL	AMABL
Stage Scale:	None	6" Diameter
Density, Unit:	None	Medium, Plot

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat Fan	Flat Fan
Nozzle Size:	XR8002VS	XR8002VS
Nozzle Spacing, Unit:	15 IN	15 IN
Nozzles/Row:	4	4
Band Width, Unit:	60 IN	60 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.2 MPH	3.2 MPH
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

The Ohio State University

GREEN ONIONS - WEED CONTROL AND CROP TOLERANCE WITH PENDIMETHALIN
IR-4 PR. NO. : P5097

Trial ID: GRONWCCTPENDIM 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

TRIAL COMMENTS:

The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100 = death of crop/ complete weed control. For weed density: L0W = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot. All plots were hand weeded on 9/3/10 due to heavy weed pressure. The stunt seen on the untreated controls (3 & 6 WATPOST) was due to weed pressure. On 10/21/10, we harvested 3 linear feet of onions in the row center. We then counted the number of plants and took a fresh weight in kilograms. We also took photos to verify if there were any visual differences between treatments.

The Ohio State University

GREEN ONIONS - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO. : P5097

Trial ID: GRONWCCTPENDIM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
Weed Code							AMABL	POROL	
Crop Code					ALLCE	ALLCE	ALLCE	ALLCE	ALLCE
Part Rated					PLANT	PLANT	WEED	WEED	PLANT
Rating Data Type					CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS
Rating Unit					%	%	%	%	%
Rating Date					8/26/10	8/26/10	8/26/10	8/26/10	9/2/10
Trt-Eval Interval					2WATPRE	2WATPRE	2WATPRE	2WATPRE	3WATPRE
# Subsamples, Dec.					0	0	0	0	0
1	UNTREATED CONTROL				0	0	0	0	0
2	WEED FREE CONTROL				0	0	100	100	0
3	DUAL MAGNUM+	1.33	pt/a	PRE	0	0	100	80	0
	PROWL H2O	1.05	qt/a	POST					
4	DUAL MAGNUM+	1.33	pt/a	PRE	0	0	100	80	0
	PROWL H2O	2.1	qt/a	POST					
5	DUAL MAGNUM+	1.33	pt/a	PRE	0	0	100	80	0
	PROWL H2O	4.2	qt/a	POST					
6	PROWL H2O+	2.1	qt/a	PRE	0	0	100	90	0
	PROWL H2O	2.1	qt/a	POST					
LSD (P=.05)					0	0.0	0.0	0.0	0.0
Standard Deviation					0	0.0	0.0	0.0	0.0
CV					0	0.0	0.0	0.0	0.0

The Ohio State University

GREEN ONIONS - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO. : P5097

Trial ID: GRONWCCTPENDIM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9	10
	Weed Code					AMABL	POROL		
	Crop Code				ALLCE	ALLCE	ALLCE	ALLCE	ALLCE
	Part Rated				PLANT	WEED	WEED	PLANT	PLANT
	Rating Data Type				STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT
	Rating Unit				%	%	%	%	%
	Rating Date				9/2/10	9/2/10	9/2/10	9/9/10	9/9/10
	Trt-Eval Interval				3WATPRE	3WATPRE	3WATPRE	4WATPRE	4WATPRE
	# Subsamples, Dec.				0	0	0	0	0
1	UNTREATED CONTROL				0	0	0	0	0
2	WEED FREE CONTROL				0	100	100	0	0
3	DUAL MAGNUM+	1.33	pt/a	PRE	0	93	64	0	0
	PROWL H2O	1.05	qt/a	POST					
4	DUAL MAGNUM+	1.33	pt/a	PRE	0	93	66	0	0
	PROWL H2O	2.1	qt/a	POST					
5	DUAL MAGNUM+	1.33	pt/a	PRE	0	93	68	0	0
	PROWL H2O	4.2	qt/a	POST					
6	PROWL H2O+	2.1	qt/a	PRE	0	95	93	0	0
	PROWL H2O	2.1	qt/a	POST					
	LSD (P=.05)				0.0	3.8	4.4	0.0	0.0
	Standard Deviation				0.0	2.5	2.9	0.0	0.0
	CV				0.0	3.2	4.5	0.0	0.0

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GREEN ONIONS - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO. : P5097

Trial ID: GRONWCCTPENDIM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	11	12	13	14	15
	Weed Code								
	Crop Code				ALLCE	ALLCE	ALLCE	ALLCE	ALLCE
	Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				CHLOROSIS	STUNT	CHLOROSIS	STUNT	CHLOROSIS
	Rating Unit				%	%	%	%	%
	Rating Date				9/16/10	9/16/10	9/30/10	9/30/10	10/21/10
	Trt-Eval Interval				1WATPOST	1WATPOST	3WATPOST	3WATPOST	6WATPOST
	# Subsamples, Dec.				0	0	0	0	0
1	UNTREATED CONTROL				0	0	0	19	0
2	WEED FREE CONTROL				0	0	0	0	0
3	DUAL MAGNUM+	1.33	pt/a	PRE	0	0	0	0	0
	PROWL H2O	1.05	qt/a	POST					
4	DUAL MAGNUM+	1.33	pt/a	PRE	0	0	0	0	0
	PROWL H2O	2.1	qt/a	POST					
5	DUAL MAGNUM+	1.33	pt/a	PRE	0	0	0	0	0
	PROWL H2O	4.2	qt/a	POST					
6	PROWL H2O+	2.1	qt/a	PRE	0	0	0	0	0
	PROWL H2O	2.1	qt/a	POST					
	LSD (P=.05)				0.0	0.0	0.0	1.5	0.0
	Standard Deviation				0.0	0.0	0.0	1.0	0.0
	CV				0.0	0.0	0.0	32.7	0.0

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GREEN ONIONS - WEED CONTROL AND CROP TOLERANCE
WITH PENDIMETHALIN
IR-4 PR. NO. : P5097

Trial ID: GRONWCCTPENDIM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	16	17	18	19
	Weed Code							
	Crop Code				ALLCE	ALLCE	ALLCE	ALLCE
	Part Rated				PLANT	PLANT	PLANT	PLANT
	Rating Data Type				STUNT	TOTAL NO.	TOTAL WT	AVE WT
	Rating Unit				%	PER/PLOT	KG/PLOT	G/PLANT
	Rating Date				10/21/10	10/15/10	10/15/10	10/15/10
	Trt-Eval Interval				6WATPOST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				0	0	1	1
1	UNTREATED CONTROL				24	108	0.3	262
2	WEED FREE CONTROL				0	112	0.5	516
3	DUAL MAGNUM+	1.33	pt/a	PRE	0	96	0.4	436
	PROWL H2O	1.05	qt/a	POST				
4	DUAL MAGNUM+	1.33	pt/a	PRE	0	111	0.5	455
	PROWL H2O	2.1	qt/a	POST				
5	DUAL MAGNUM+	1.33	pt/a	PRE	0	101	0.5	476
	PROWL H2O	4.2	qt/a	POST				
6	PROWL H2O+	2.1	qt/a	PRE	0	114	0.5	531
	PROWL H2O	2.1	qt/a	POST				
	LSD (P=.05)				1.5	34.2	0.2	168.6
	Standard Deviation				1.0	22.7	0.1	111.9
	CV				25.8	21.2	25.1	25.1

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HICKORY - STUMP SPROUT CONTROL USING MAT28 WITH ESCORT AND ARSENAL

Trial ID: STSPCONTMAT28W0910
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: To evaluate rates of MAT28 in combination with Escort and Imazapyr for industrial rights - of - way and waxy leaf brush control.

TRIAL SUMMARY: Shagbark hickory stump sprouts were sprayed in summer 2009 and were periodically rated for degree of control. Listed below are the 5 most effective treatments. Rates are in oz/A, followed by % sprout kill one year after application.

1) MAT28 (9)/MSO; 98% sprout kill.
2) Milestone (3.3)/Roundup (52.4)/Arsenal (6.4)/NIS; 97% sprout kill.
3) MAT28 (9)/Escort (2.42)/MSO; 95% sprout kill.
4) MAT28 (9)/Escort (2.42)/Arsenal (25.2)/MSO; 92% sprout kill.
5) MAT28 (5.64)/Escort (1.5)/Arsenal (15.6)/MSO; 91% sprout kill.

The following treatments were significantly different from the 5 listed above: MAT28 (3.76)/Escort (1)/Arsenal (10.4)/MSO, and MAT28 (3.76)/Escort (1)/MSO.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 7/28/2009
Planned Completion Date: 10/30/09

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	CYAOV	Shagbark Hickory	*Carya ovata* (MILL) K.KOCH

SITE AND DESIGN

Plot Width, Unit: 10 FT.
Site Type: Fence Line
Tillage Type: None

Plot Length, Unit: 10 FT.
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 11	% OM: 3.0	Texture: Silt Loam
% Silt: 75	pH: 6.0	Soil Name: Wooster Silt Loam
% Clay: 14	CEC: 12.0	Fert. Level: Moderate

The Ohio State University

HICKORY - STUMP SPROUT CONTROL USING MAT28 WITH ESCORT AND ARSENAL

Trial ID: STSPCONTMAT28W0910
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A
Application Date:	7/28/2009
Time of Day:	11 AM-12 PM
Application Method:	Spray
Application Timing:	POST
Applic. Placement:	Direct
Air Temp., Unit:	78.7 F
% Relative Humidity:	65.7
Wind Velocity, Unit:	4
Soil Moisture:	Dry
Soil Temperature:	73.1 F

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage	CYAOV
Stage Scale:	Vegetative
Height, Unit:	4 FT

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	CYAOV, POST
Stage Scale:	Full Leaf
Density, Unit:	Medium, Plot

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	Flat Fan
Nozzle Size:	8003VS
Nozzles/Row:	1
Band Width, Unit:	24 IN
Spray Volume, Unit:	25 GPA
Propellant:	CO2

TRIAL COMMENTS:

Hickories selected for the trial were vigorous stump sprouts, and were sprayed to runoff on 7/28/09. They were rated for percent defoliation at 45 and 90 days after treatment in 2009. They were rated again in the spring of 2010, commencing with the final 1 year after application rating on July 28, 2010.

The Ohio State University

HICKORY - STUMP SPROUT CONTROL USING MAT28
WITH ESCORT AND ARSENAL

Trial ID: STSPCONTMAT28W0910
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				CYAOV	CYAOV	CYAOV	CYAOV	CYAOV
Crop Code				NONE	NONE	NONE	NONE	NONE
Part Rated				LEAF	LEAF	SPROUT	LEAF	LEAF
Rating Data Type				BURN	GREEN	DEFOLIATION	BURN	GREEN
Rating Unit				%	%	%	%	%
Rating Date				9/14/09	9/14/09	9/14/09	10/28/09	10/28/09
Trt-Eval Interval				45 DAT	45 DAT	45 DAT	90 DAT	90 DAT
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
UNTREATED CONTROL				0	0	0	0	0
MAT 28+	3.76	oz/a	POST	86	14	0	100	0
ESCORT+	1	oz/a	POST					
ARSENAL+	10.4	oz/a	POST					
MSO	1	qt/a	POST					
MAT 28+	5.64	oz/a	POST	80	20	0	100	0
ESCORT+	1.5	oz/a	POST					
ARSENAL+	15.6	oz/a	POST					
MSO	1	qt/a	POST					
MAT 28+	7.5	oz/a	POST	80	20	0	100	0
ESCORT+	2	oz/a	POST					
ARSENAL+	20.8	oz/a	POST					
MSO	1	qt/a	POST					
MAT 28+	9	oz/a	POST	75	25	0	100	0
ESCORT+	2.42	oz/a	POST					
ARSENAL+	25.2	oz/a	POST					
MSO	1	qt/a	POST					
MAT 28+	3.76	oz/a	POST	63	37	0	100	0
ESCORT+	1	oz/a	POST					
MSO	1	qt/a	POST					
MAT 28+	9	oz/a	POST	95	5	0	100	0
ESCORT+	2.42	oz/a	POST					
MSO	1	qt/a	POST					
MAT 28+	3.76	oz/a	POST	40	60	0	100	0
MSO	1	qt/a	POST					
MAT 28+	9	oz/a	POST	44	56	0	100	0
MSO	1	qt/a	POST					

The Ohio State University

HICKORY - STUMP SPROUT CONTROL USING MAT28
WITH ESCORT AND ARSENAL

Trial ID: STSPCONTMAT28W0910
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				CYAOV	CYAOV	CYAOV	CYAOV	CYAOV
Crop Code				NONE	NONE	NONE	NONE	NONE
Part Rated				LEAF	LEAF	SPROUT	LEAF	LEAF
Rating Data Type				BURN	GREEN	DEFOLIATION	BURN	GREEN
Rating Unit				%	%	%	%	%
Rating Date				9/14/09	9/14/09	9/14/09	10/28/09	10/28/09
Trt-Eval Interval				45 DAT	45 DAT	45 DAT	90 DAT	90 DAT
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
GARLON+	64	oz/a	POST	95	5	0	100	0
ARSENAL+	16	oz/a	POST					
MSO	1	qt/a	POST					
MILESTONE+	3.3	oz/a	POST	82	19	0	100	0
ROUNDUP WEATHERMAX	52.4	oz/a	POST					
ARSENAL+	6.4	oz/a	POST					
NIS	1	qt/a	POST					
LSD (P=.05)				35.2	35.2	0.0	0.0	0.0
Standard Deviation				24.4	24.4	0.0	0.0	0.0
CV				36.3	103.2	0.0	0.0	0.0

The Ohio State University

HICKORY - STUMP SPROUT CONTROL USING MAT28
WITH ESCORT AND ARSENAL

Trial ID: STSPCONTMAT28W0910
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				CYAOV	CYAOV	CYAOV	CYAOV
Crop Code				NONE	NONE	NONE	NONE
Part Rated				SPROUT	SPROUT	SPROUT	SPROUT
Rating Data Type				DEFOLIATION	KILL	KILL	KILL
Rating Unit				%	%	%	%
Rating Date				10/28/09	5/26/10	6/30/10	7/28/10
Trt-Eval Interval				90 DAT	300 DAT	330 DAT	365 DAT
# Subsamples, Dec.				0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9
UNTREATED CONTROL				0	0	0	0
MAT 28+	3.76	oz/a	POST	65	81	65	58
ESCORT+	1	oz/a	POST				
ARSENAL+	10.4	oz/a	POST				
MSO	1	qt/a	POST				
MAT 28+	5.64	oz/a	POST	14	98	95	91
ESCORT+	1.5	oz/a	POST				
ARSENAL+	15.6	oz/a	POST				
MSO	1	qt/a	POST				
MAT 28+	7.5	oz/a	POST	31	86	69	71
ESCORT+	2	oz/a	POST				
ARSENAL+	20.8	oz/a	POST				
MSO	1	qt/a	POST				
MAT 28+	9	oz/a	POST	14	93	91	92
ESCORT+	2.42	oz/a	POST				
ARSENAL+	25.2	oz/a	POST				
MSO	1	qt/a	POST				
MAT 28+	3.76	oz/a	POST	23	76	53	49
ESCORT+	1	oz/a	POST				
MSO	1	qt/a	POST				
MAT 28+	9	oz/a	POST	39	96	94	95
ESCORT+	2.42	oz/a	POST				
MSO	1	qt/a	POST				
MAT 28+	3.76	oz/a	POST	5	76	79	75
MSO	1	qt/a	POST				
MAT 28+	9	oz/a	POST	21	83	93	98
MSO	1	qt/a	POST				

The Ohio State University

HICKORY - STUMP SPROUT CONTROL USING MAT28
WITH ESCORT AND ARSENAL

Trial ID: STSPCONTMAT28W0910
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				CYAOV	CYAOV	CYAOV	CYAOV
Crop Code				NONE	NONE	NONE	NONE
Part Rated				SPROUT	SPROUT	SPROUT	SPROUT
Rating Data Type				DEFOLIATION	KILL	KILL	KILL
Rating Unit				%	%	%	%
Rating Date				10/28/09	5/26/10	6/30/10	7/28/10
Trt-Eval Interval				90 DAT	300 DAT	330 DAT	365 DAT
# Subsamples, Dec.				0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9
GARLON+	64	oz/a	POST	45	81	75	68
ARSENAL+	16	oz/a	POST				
MSO	1	qt/a	POST				
MILESTONE+	3.3	oz/a	POST	89	99	100	97
ROUNDUP WEATHERMAX	52.4	oz/a	POST				
ARSENAL+	6.4	oz/a	POST				
NIS	1	qt/a	POST				
LSD (P=.05)				39.9	29.0	30.9	33.3
Standard Deviation				27.7	20.1	21.4	23.1
CV				88.2	25.4	29.0	32.0

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB

Trial ID: LETTALTKERBM 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: To find an alternative to Kerb herbicide for lettuce.

TRIAL SUMMARY: This trial had high purslane and pigweed pressure. Kerb is very effective on purslane but weak on pigweed. Out of 11 treatments, the split applications of Prowl H2O+ Dual Magnum, and Dual Magnum (0.68+ 1.07 pt/A) have the most potential for a Kerb replacement. This takes into account crop injury, weed control, total yield and average head weight.

TRIAL LOCATION

City: Willard
State/Prov.: Ohio
Postal Code: 44890
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 8/2/2010
Planned Completion Date: 9/2/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	AMABL	Prostrate pigweed	*Amaranthus blitoides*
2	AMABL	Smooth pigweed	*Amaranthus hybridus*
3	POROL	Common purslane	*Portulaca oleracea*

Crop 1: LACSA Lettuce
Planting Date: 8/2/2010
Depth: 3 IN
Row Spacing: 5 FT
Soil Moisture: Moist

Variety: Tahoma
Planting Method: Transplanter
Plot Length: 25 FT
Spacing Within Row: 12 IN

SITE AND DESIGN

Plot Width, Unit: 5 FT
Site Type: Level Field
Tillage Type: Conventional

Plot Length, Unit: 25 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 64	% OM: 47.9	Texture: Muck
% Silt: 31	pH: 5.4	Soil Name: Linwood Muck
% Clay: 5	CEC: 70.3	Fert. Level: High

APPLICATION DESCRIPTION

	A	B
Application Date:	8/4/2010	8/12/2010
Time of Day:	11:00 AM	8:50 AM
Application Method:	Spray	Spray
Application Timing:	Post- Transplant (POSTTP)	20 DAY Pre-harvest interval (PHI)
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	83.9 F	77.0 F
% Relative Humidity:	79.8	88.2
Wind Velocity, Unit:	5.5 MPH	2.1 MPH

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB

Trial ID: LETTALTKERBM 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Dew Presence (Y/N):	N	N
Soil Moisture:	Moist	Dry
% Cloud Cover:	40	30

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	LACSA	LACSA
Stage Scale:	Vegetative	Vegetative
Height, Unit:	3 IN	4 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AMABL, POSTTP	AMABL
Stage Scale:	None	4-6 Leaf Stage
Density, Unit:	None	High, Plot
Weed 2 Code, Stage:	AMACH, POSTTP	AMACH
Stage Scale:	None	4-6 Leaf Stage
Density, Unit:	None	High, Plot
Weed 3 Code, Stage:	POROL, POSTTP	POROL
Stage Scale:	None	2-4 Leaf Stage
Density, Unit:	None	High, Plot

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40	40
Nozzle Type:	Flat Fan	Flat Fan
Nozzle Size:	8002VS	8002VS
Nozzle Spacing, Unit:	15 IN	15 IN
Nozzles/Row:	2	2
Band Width, Unit:	36 IN	36 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.2 MPH	3.2 MPH
Carrier:	H_2O	H_2O
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

TRIAL COMMENTS:

Visual observations were taken 1, 2 and 3 weeks after the first application. The 0-100 linear scale was used in which 0 = 0 crop injury/no control, and 100 = death of crop/ complete weed control. For weed density, : L0W = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot.
We harvested 10 linear feet of row (or PLOT) , counted the number of heads within that plot, and weighed them in pounds. We then randomly selected 5 heads, and measured the average (AVE) diameter in centimeters (CM).

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB

Trial ID: LETTALTKERBM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4
	Weed Code					AMACH	POROL	
	Crop Code				LACSA	LACSA	LACSA	LACSA
	Part Rated				PLANT	WEED	WEED	PLANT
	Rating Data Type				INJURY	CONTROL	CONTROL	INJURY
	Rating Unit				%	%	%	%
	Rating Date				8/11/10	8/11/10	8/11/10	8/19/10
	Trt-Eval Interval				1WAT	1WAT	1WAT	2WAT
	# Subsamples, Dec.				0	0	0	0
1	WEEDY CONTROL				0	25	25	0
2	WEED FREE CONTROL				0	74	74	0
3	DUAL MAGNUM	0.68	pt/a	2 DAY POSTTP	28	20	73	29
4	DUAL MAGNUM	1.07	pt/a	2 DAY POSTTP	39	45	80	28
5	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	31	41	70	24
	DUAL MAGNUM	0.68	pt/a	20 DAY PHI				
6	DUAL MAGNUM+	1.07	pt/a	2 DAY POSTTP	44	38	78	43
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
7	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	28	28	63	24
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
8	PROWL H2O	2.1	pt/a	2 DAY POSTTP	0	23	41	6
9	PROWL H2O+	2.1	pt/a	2 DAY POSTTP	0	28	49	11
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
10	KERB	12	lb/a	2 DAY POSTTP	3	41	89	13
11	STARANE ULTRA	0.286	pt/a	2 DAY POSTTP	70	10	24	74
12	SPARTAN	0.1	pt/a	2 DAY POSTTP	35	73	71	29
	LSD (P=.05)				7.8	49.5	32.9	17.5
	Standard Deviation				5.4	34.3	22.8	12.1
	CV				23.5	92.7	37.2	52.2

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB

Trial ID: LETTALTKERBM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	AMACH LACSA WEED CONTROL % 8/19/10 2WAT 0	POROL LACSA WEED CONTROL % 8/19/10 2WAT 0	AMABL LACSA WEED CONTROL % 8/19/10 2WAT 0	LACSA PLANT INJURY % 8/25/10 3WAT 0
					5	6	7	8
1	WEEDY CONTROL				0	0	0	0
2	WEED FREE CONTROL				100	100	100	0
3	DUAL MAGNUM	0.68	pt/a	2 DAY POSTTP	8	54	28	11
4	DUAL MAGNUM	1.07	pt/a	2 DAY POSTTP	18	61	50	19
5	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	40	56	33	14
	DUAL MAGNUM	0.68	pt/a	20 DAY PHI				
6	DUAL MAGNUM+	1.07	pt/a	2 DAY POSTTP	28	66	58	25
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
7	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	26	63	68	16
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
8	PROWL H2O	2.1	pt/a	2 DAY POSTTP	13	36	14	5
9	PROWL H2O+	2.1	pt/a	2 DAY POSTTP	25	58	51	11
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
10	KERB	12	lb/a	2 DAY POSTTP	20	90	0	5
11	STARANE ULTRA	0.286	pt/a	2 DAY POSTTP	5	26	4	80
12	SPARTAN	0.1	pt/a	2 DAY POSTTP	55	61	25	25
LSD (P=.05)					20.0	10.0	20.1	10.4
Standard Deviation					13.9	6.9	13.9	7.2
CV					49.5	12.4	39.0	40.9

The Ohio State University

LETTUCE - ALTERNATIVES TO KERB

Trial ID: LETTALTKERBM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	AMACH LACSA WEED CONTROL % 8/25/10 3WAT 0 9	POROL LACSA WEED CONTROL % 8/25/10 3WAT 0 10	AMABL LACSA WEED CONTROL % 8/25/10 3WAT 0 11	LACSA HEAD TOTAL NO PER/PLOT 9/8/10 YIELD 0 12
1	WEEDY CONTROL				0	0	0	9
2	WEED FREE CONTROL				99	99	99	8
3	DUAL MAGNUM	0.68	pt/a	2 DAY POSTTP	18	30	21	9
4	DUAL MAGNUM	1.07	pt/a	2 DAY POSTTP	23	45	53	8
5	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	40	44	55	8
	DUAL MAGNUM	0.68	pt/a	20 DAY PHI				
6	DUAL MAGNUM+	1.07	pt/a	2 DAY POSTTP	40	63	65	9
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
7	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	13	43	59	10
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
8	PROWL H2O	2.1	pt/a	2 DAY POSTTP	3	15	9	9
9	PROWL H2O+	2.1	pt/a	2 DAY POSTTP	26	41	68	9
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI				
10	KERB	12	lb/a	2 DAY POSTTP	11	91	10	10
11	STARANE ULTRA	0.286	pt/a	2 DAY POSTTP	3	0	0	6
12	SPARTAN	0.1	pt/a	2 DAY POSTTP	40	33	25	10
LSD (P=.05)					22.4	13.4	24.1	2.4
Standard Deviation					15.5	9.3	16.7	1.7
CV					59.3	22.2	43.3	19.4

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LETTUCE - ALTERNATIVES TO KERB

Trial ID: LETTALTKERBM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15
	Weed Code						
	Crop Code				LACSA	LACSA	LACSA
	Part Rated				HEAD	HEAD	HEAD
	Rating Data Type				TOTAL WEIGHT	AVE WEIGHT	AVE DIAM
	Rating Unit				LBS/PLOT	LBS	CM.
	Rating Date				9/8/10	9/8/10	9/8/10
	Trt-Eval Interval				YIELD	YIELD	YIELD
	# Subsamples, Dec.				2	2	0
1	WEEDY CONTROL				5.9	0.6	14
2	WEED FREE CONTROL				7.4	0.9	15
3	DUAL MAGNUM	0.68	pt/a	2 DAY POSTTP	5.9	0.7	15
4	DUAL MAGNUM	1.07	pt/a	2 DAY POSTTP	5.4	0.9	14
5	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	5.6	0.9	14
	DUAL MAGNUM	0.68	pt/a	20 DAY PHI			
6	DUAL MAGNUM+	1.07	pt/a	2 DAY POSTTP	5.3	0.6	14
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI			
7	DUAL MAGNUM+	0.68	pt/a	2 DAY POSTTP	6.4	0.7	14
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI			
8	PROWL H2O	2.1	pt/a	2 DAY POSTTP	6.8	0.8	15
9	PROWL H2O+	2.1	pt/a	2 DAY POSTTP	6.8	0.8	14
	DUAL MAGNUM	1.07	pt/a	20 DAY PHI			
10	KERB	12	lb/a	2 DAY POSTTP	7.2	0.7	14
11	STARANE ULTRA	0.286	pt/a	2 DAY POSTTP	0.7	0.1	7
12	SPARTAN	0.1	pt/a	2 DAY POSTTP	6.2	0.6	13
	LSD (P=.05)				1.8	0.2	1
	Standard Deviation				1.3	0.1	0.7
	CV				21.6	15.9	4.91

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MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCNWSTOFM 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan, Tim Koch, Connie Echaiz
Investigator: Doug Doohan

Objective: To evaluate PRE and POST herbicides for the control of marsh yellowcress, *Rorippa palustris.*

TRIAL SUMMARY: Twelve herbicides applied PRE were evaluated for marsh yellowcress control. The most promising herbicides were: Sencor, (100% control) ; Sandea, (93% control); Lorox, (80% control), and Chateau, (60% control).

TRIAL LOCATION

City: Willard
State/Prov.: Ohio
Postal Code: 44890
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 5/6/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	RORPA	Yellow marshcress	*Rorippa palustris*

SITE AND DESIGN

Plot Width, Unit: 6 FT
Site Type: Level Field
Tillage Type: Conventional

Plot Length, Unit: 20 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 64
% Silt: 31
% Clay: 5

% OM: 47.9
pH: 5.4
CEC: 70.3

Texture: Muck
Soil Name: Linwood Muck
Fert. Level: High

APPLICATION DESCRIPTION

	A	B
Application Date:	5/6/2010	5/27/2010
Time of Day:	11:40 AM	3 PM
Application Method:	Spray	Spray
Application Timing:	POST	POST
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	51.4 F	90 F
% Relative Humidity:	77.7	96
Wind Velocity, Unit:	1.8 MPH	5 MPH
% Cloud Cover:	30	50

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	RORPA, PRE	RORPA, POST
Stage Scale:	None	3 Leaf Stage
Density, Unit:	High, Plot	High, Plot

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MARSH YELLOWCRESS - CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCNWSTOFM 2010
Location: Willard, Ohio

Study Dir.: Doug Doohan, Tim Koch, Connie Echaiz
Investigator: Doug Doohan

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40	40
Nozzle Type:	XR Teejet flat fan	XR Teejet flat fan
Nozzle Size:	8002VS	8002VS
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	4	4
Band Width, Unit:	6 FT	6 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	2.7 MPH	2.7 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

TRIAL COMMENTS:

Visual observations were taken at 3, 4, and 7 weeks after application. The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100= death of crop/ complete weed control. For weed density: L0W = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot.

The Ohio State University

MARSH YELLOWCRESS -CONTROLLING A NEW WEED SPECIES THREATENING OHIO FARMS

Trial ID: MYCNWSTOFM 2010
Location: Willard, Ohio
Study Dir.: Doug Doohan, Tim Koch, Connie Echaiz
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3
	Weed Code				RORPA	RORPA	RORPA
	Crop Code				NONE	NONE	NONE
	Part Rated				WEED	WEED	WEED
	Rating Data Type				CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%
	Rating Date				5/25/10	6/10/10	6/24/10
	Trt-Eval Interval				3 WAT	4 WAT	7 WAT
	# Subsamples, Dec.				0	0	0
1	UNTREATED CONTROL				0	0	0
2	DUAL MAGNUM	1.33	pt/a	PRE	29	28	20
3	GOALTENDER	1	pt/a	PRE	50	24	5
4	OUTLOOK	21	fl oz/a	PRE	63	39	13
5	SANDEA	1	oz/a	PRE	98	93	85
6	SENCOR	1.33	lb/a	PRE	100	100	90
7	NORTRON	2	pt/a	PRE	8	5	8
8	LOROX	3	lb/a	PRE	73	80	49
9	PROWL H2O	4	pt/a	PRE	16	34	0
10	SPARTAN	6	oz/a	PRE	15	8	0
11	COMMAND	1	pt/a	PRE	21	6	0
12	CHATEAU	1	oz/a	PRE	73	60	33
13	STARANE ULTRA	0.374	pt/a	POST	0	15	0
	LSD (P=.05)				12.5	17.5	15.8
	Standard Deviation				8.7	12.3	11.1
	CV				20.9	32.5	47.8

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: Evaluating effect of simulated drift rates of 2, 4-D and dicamba on green bell peppers.

TRIAL SUMMARY: Visual injury was observed 3 days after treatment at all rates of 2, 4-D, dicamba, and with the tank-mix. of 2, 4-D and glyphosate. Yield was more sensitive to dicamba than to 2, 4-D.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA
Postal Code: 44691

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 6/21/2010
Planned Completion Date: 11/5/2010

CROP AND WEED DESCRIPTION

Crop 1: CPSAN Bell Pepper
Planting Date: 6/21/2010
Rate: 1 Plant/24"
Row Spacing: 5 FT
Soil Moisture: Moist

Variety: Aristotle
Planting Method: Machine Transplanted
Depth: 2 IN
Spacing Within Row: 24 IN
Seed Bed: Conventional

SITE AND DESIGN

Plot Width, Unit: 3 FT
Site Type: Level Well Drained Field
Tillage Type: Moldboard Plow

Plot Length, Unit: 25 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 16
% Silt: 72
% Clay: 12

% OM: 3.11
pH: 6.7
CEC: 8.5

Texture: Silt Loam
Soil Name: Wooster Silt Loam
Fert. Level: Moderate

APPLICATION DESCRIPTION

	A
Application Date:	7/13/2010
Time of Day:	10-11AM
Application Method:	Spray
Application Timing:	POST3WATP
Applic. Placement:	Broadcast
Air Temp., Unit:	78.5 F
% Relative Humidity:	85.8
Wind Velocity, Unit:	2 MPH
Soil Moisture:	Moist
% Cloud Cover:	30

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	CPSAN POST
Stage Scale:	10 Leaf Stage
Height, Unit:	4 IN

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	Flat Fan
Nozzle Size:	80015 VS
Nozzle Spacing, Unit:	18 IN
Nozzles/Row:	2
Band Width, Unit:	36 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	3.3 MPH
Spray Volume, Unit:	15 GPA
Propellant:	CO2

TRIAL COMMENTS

Aristotle was the pepper variety used in the trial and had a 72 day maturity. Plants were greenhouse grown and were direct seeded into flats and kept in the greenhouse for about 6 weeks. They were transplanted to the field on 6/21/10. Prior to transplanting Dual Magnum at 1 pint/acre was applied broadcast for weed control. Visual injury ratings (necrosis, chlorosis, epinasty) were taken on a 0-100 scale, with 0 representing no injury, and 100 representing crop death). Herbicide treatments were applied by hand on 7/13/10, approximately 3 weeks after transplanting. Ratings were taken at 3, 7, 14 and 21 days after treatment. Plant heights in centimeters were taken from the soil line to the growing tip on 5 consecutive plants at 7, 14, and 28 days after treatment.
We noticed that Clarity at 1/50X at at 1 week after treatment had no growing point at all, though from a distance the plant looked fine. The trial was harvested 4 times on 8/27, 9/7, 9/17, and 10/19, based initially on the visual maturity of the control plants.
Grades were based on the USDA "United States Standards for Grades of Sweet Peppers", and were U.S. Fancy, U.S. # 1, and U.S.# 2 . Peppers were counted, seperated into respective grades, and weighed in ounces.

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	LEAF CURL	INJURY
	Rating Unit				%	%	%	%	%
	Rating Date				7/16/10	7/16/10	7/16/10	7/16/10	7/16/10
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	3 DAT
	# Subsamples, Dec.				0	0	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	0	100	16	80
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	0	9	6	9
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	0	5	6	9
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	0	5	4	5
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	0	4	6	6
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	0	0	1	10	6
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	0	0	10	9
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	0	5	5	6
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	0	4	6	5
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	0	1	11	9
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	0	1	13	10
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	0	4	8	9
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	0	4	6	8
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	0	4	6	6
15	UNTREATED CONTROL				0	0	0	0	0
	LSD (P=.05)				0	0	5	6.8	3.7
	Standard Deviation				0	0	3.5	4.8	2.6
	CV				0	0	35.65	62.74	21.94

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9	10
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	LEAF CURL	INJURY
	Rating Unit				%	%	%	%	%
	Rating Date				7/20/10	7/20/10	7/20/10	7/20/10	7/20/10
	Trt-Eval Interval				7 DAT	7 DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	30	70	0	75
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	5	23	5	34
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	5	19	3	30
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	3	20	0	21
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	6	29	0	33
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	0	0	9	8	16
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	5	10	0	30
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	4	23	1	24
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	6	24	1	26
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	5	9	6	29
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	1	10	15	28
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	3	21	10	26
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	8	26	0	28
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	4	10	8	19
15	UNTREATED CONTROL				0	0	0	0	0
	LSD (P=.05)				0	5	21.1	13.7	14.8
	Standard Deviation				0	3.5	14.8	9.6	10.4
	CV				0	63.27	73.45	255.87	37.33

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	11	12	13	14	15
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT 1	PLANT 2	PLANT 3	PLANT 4	PLANT 5
	Rating Data Type				HEIGHT	HEIGHT	HEIGHT	HEIGHT	HEIGHT
	Rating Unit				CM	CM	CM	CM	CM
	Rating Date				7/20/10	7/20/10	7/20/10	7/20/10	7/20/10
	Trt-Eval Interval				7 DAT	7 DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				1	1	1	1	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	9.8	9.4	11.2	9.6	9.5
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	15.5	14.3	15.8	15.3	14.6
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	14.7	13.8	15.4	13.4	15.4
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	17	14.5	14.9	15.5	16.7
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	12.2	13.5	13.5	13.7	14.4
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	14.7	12.6	12.7	13.9	13.5
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	13.3	13.4	12.8	12.8	11.3
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	13.8	13.6	12.6	14.2	13.8
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	14	14.5	13.3	12.5	13.6
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	11.4	11.6	10.8	12.6	11.1
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	10.9	10.4	11.4	12.4	11.2
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	13.3	12.7	10.5	13.7	11.6
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	13.8	13.3	14.2	13.1	16.6
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	13.4	13.8	13.5	13.4	12.5
15	UNTREATED CONTROL				12	12.8	11.2	12	13.2
	LSD (P=.05)				4.18	3.84	4.36	3.7	3.31
	Standard Deviation				2.92	2.68	3.05	2.59	2.31
	CV				21.96	20.75	23.61	19.67	17.45

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	16	17	18	19	20
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT 1
	Rating Data Type				NECROSIS	CHLOROSIS	EPINASTY	INJURY	HEIGHT
	Rating Unit				%	%	%	%	CM
	Rating Date				7/27/10	7/27/10	7/27/10	7/27/10	7/27/10
	Trt-Eval Interval				14 DAT	14 DAT	14 DAT	14 DAT	14 DAT
	# Subsamples, Dec.				0	0	0	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	3	8	63	75	11.2
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	0	31	23	21.1
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	1	34	25	20.5
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	1	35	23	21.6
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	1	29	25	16.3
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	0	0	13	14	19.5
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	5	51	29	17.2
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	3	45	44	19.3
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	0	16	29	21.1
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	1	31	26	18.2
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	0	3	23	16.1
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	1	28	31	18.8
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	1	31	23	21.3
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	1	13	14	18.7
15	UNTREATED CONTROL				0	0	0	0	18.4
	LSD (P=.05)				1.8	6.4	37.5	16.6	5.4
	Standard Deviation				1.3	4.5	26.2	11.6	3.78
	CV				774.6	281.33	93.46	43.36	20.28

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	21	22	23	24	25
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT 2	PLANT 3	PLANT 4	PLANT 5	PLANT
	Rating Data Type				HEIGHT	HEIGHT	HEIGHT	HEIGHT	NECROSIS
	Rating Unit				CM	CM	CM	CM	%
	Rating Date				7/27/10	7/27/10	7/27/10	7/27/10	8/3/10
	Trt-Eval Interval				14 DAT	14 DAT	14 DAT	14 DAT	21 DAT
	# Subsamples, Dec.				1	1	1	1	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	8.7	11.8	9.5	9.5	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	18.9	20.9	20.6	17.8	0
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	18.5	19.8	20.2	19.7	0
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	21.2	21.4	19.8	21.5	0
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	18.7	20.4	20.2	20	0
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	19.4	18.6	18.1	18.7	0
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	17.6	16.5	15.8	15.5	0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	19.9	20.1	20	21	0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	19.5	20.1	18.5	19.2	0
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	16.5	15.9	17.6	16.5	0
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	16.7	15.7	16.8	16.7	0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	17.2	16	19.5	17.5	0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	19.6	19	19.9	21.3	0
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	19.5	20	18	17.8	0
15	UNTREATED CONTROL				17.3	17	16.3	18.3	0
	LSD (P=.05)				4.63	5.8	4.67	4.56	0
	Standard Deviation				3.24	4.06	3.27	3.19	0
	CV				18.05	22.32	18.12	17.66	0

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	26	27	28	29	30
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT	PLANT	PLANT	PLANT 1	PLANT 1
	Rating Data Type				CHLOROSIS	EPINASTY	INJURY	FRUIT	FLOWERBUDS
	Rating Unit				%	%	%	PERPLANT	PERPLANT
	Rating Date				8/3/10	8/3/10	8/3/10	8/5/10	8/5/10
	Trt-Eval Interval				21 DAT	21 DAT	21 DAT	1 WAFLUT	1 WAFLUT
	# Subsamples, Dec.				0	0	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	28	69	74	0	3
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	13	5	0	51
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	8	5	0	43
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	0	5	5	2	51
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	0	0	0	1	29
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	0	0	0	1	35
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	5	10	0	41
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	8	8	0	40
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	4	5	0	42
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	0	0	1	34
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	0	0	0	24
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	0	0	0	44
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	0	0	2	44
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	0	0	0	1	32
15	UNTREATED CONTROL				0	0	0	1	35
	LSD (P=.05)				12.9	8.9	8.3	1.1	20.6
	Standard Deviation				9	6.2	5.8	0.8	14.4
	CV				492.93	84.49	78.88	141.14	39.72

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PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	31	32	33	34
	Weed Code							
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT 2	PLANT 2	PLANT 3	PLANT 3
	Rating Data Type				FRUIT	FLOWERBUDS	FRUIT	FLOWERBUDS
	Rating Unit				PERPLANT	PERPLANT	PERPLANT	PERPLANT
	Rating Date				8/5/10	8/5/10	8/5/10	8/5/10
	Trt-Eval Interval				1 WAFLUT	1 WAFLUT	1 WAFLUT	1 WAFLUT
	# Subsamples, Dec.				0	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	1	0	1
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	37	0	41
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	43	1	42
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	1	42	2	40
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	1	35	2	40
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	1	35	0	36
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	44	0	37
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	41	0	50
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	48	1	42
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	32	0	34
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	0	25	0	24
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	32	0	36
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	0	46	2	42
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	1	37	2	39
15	UNTREATED CONTROL				2	42	1	32
	LSD (P=.05)				0.8	19.2	1.3	17.7
	Standard Deviation				0.6	13.4	0.9	12.4
	CV				142.26	37.57	152.55	34.78

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PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	35	36	37	38	39
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT 4	PLANT 4	PLANT 5	PLANT 5	PLANT 1
	Rating Data Type				FRUIT	FLOWERBUDS	FRUIT	FLOWERBUDS	HEIGHT
	Rating Unit				PERPLANT	PERPLANT	PERPLANT	PERPLANT	CM
	Rating Date				8/5/10	8/5/10	8/5/10	8/5/10	8/10/10
	Trt-Eval Interval				1 WAFLUT	1 WAFLUT	1 WAFLUT	1 WAFLUT	28 DAT
	# Subsamples, Dec.				0	0	0	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	0	1	0	1	9.1
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	0	52	0	45	30.9
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	0	54	1	44	30.1
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	1	37	2	44	33
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	2	43	1	41	24.3
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	1	40	1	33	27.3
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	0	36	0	36	25.3
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	0	44	1	55	27.9
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	0	38	0	35	30.3
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	0	31	0	33	28.5
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	1	28	1	28	25.1
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	0	44	0	44	29
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	2	41	1	51	31.1
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	1	38	2	39	26.9
15	UNTREATED CONTROL				1	38	1	33	26.4
	LSD (P=.05)				1.5	21.7	1.2	19.7	6.73
	Standard Deviation				1	15.2	0.8	13.8	4.71
	CV				197.13	40.5	135.75	36.94	17.44

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage					
	Weed Code								
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT 2	PLANT 3	PLANT 4	PLANT 5	PLANT 1
	Rating Data Type				HEIGHT	HEIGHT	HEIGHT	HEIGHT	FRUIT
	Rating Unit				CM	CM	CM	CM	PERPLANT
	Rating Date				8/10/10	8/10/10	8/10/10	8/10/10	8/12/10
	Trt-Eval Interval				28 DAT	28 DAT	28 DAT	28 DAT	2WAFLUT
	# Subsamples, Dec.				1	1	1	1	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	8.6	11.1	9	9.3	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	30.9	30.5	30.6	31.1	0
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	28.1	28.5	28.9	29.3	1
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	31.8	28.8	32.8	33.1	2
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	26.6	29.9	28.1	28.1	1
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	27.8	24.9	29.6	28.8	2
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	26.4	25.1	23.6	23.6	0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	28.1	30.1	28.4	31.5	0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	30.6	29.1	28.3	29.5	0
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	27	25.1	26.6	24.5	1
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	24.9	25.1	25.1	26.4	0
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	28	24.4	29.3	28.6	0
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	28.1	29.4	29.6	38.5	2
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	28.3	28.3	25.6	26.9	2
15	UNTREATED CONTROL				28.8	26.4	25.4	28.1	1
	LSD (P=.05)				7.11	6.27	6.23	7.84	1.4
	Standard Deviation				4.98	4.39	4.36	5.48	1
	CV				18.48	16.59	16.31	19.72	126.23

The Ohio State University

PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage				
Weed Code								
Crop Code					CPSAN	CPSAN	CPSAN	CPSAN
Part Rated					PLANT 1	PLANT 2	PLANT 2	PLANT 3
Rating Data Type					FLOWERBUDS	FRUIT	FLOWERBUDS	FRUIT
Rating Unit					PERPLANT	PERPLANT	PERPLANT	PERPLANT
Rating Date					8/12/10	8/12/10	8/12/10	8/12/10
Trt-Eval Interval					2WAFLUT	2WAFLUT	2WAFLUT	2WAFLUT
# Subsamples, Dec.					0	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	2	0	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	51	1	49	0
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	53	0	51	1
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	51	2	50	3
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	37	1	39	2
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	43	1	53	1
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	52	0	47	0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	48	0	56	0
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	52	0	48	1
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	36	0	44	1
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	33	0	34	1
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	51	0	38	1
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	50	0	47	2
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	43	2	45	3
15	UNTREATED CONTROL				40	3	47	2
LSD (P=.05)					17.1	0.8	16.1	1.8
Standard Deviation					11.9	0.6	11.3	1.2
CV					28	91.16	26.2	106.92

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PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage				
	Weed Code							
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT 3	PLANT 4	PLANT 4	PLANT 5
	Rating Data Type				FLOWERBUDS	FRUIT	FLOWERBUDS	FRUIT
	Rating Unit				PERPLANT	PERPLANT	PERPLANT	PERPLANT
	Rating Date				8/12/10	8/12/10	8/12/10	8/12/10
	Trt-Eval Interval				2WAFLUT	2WAFLUT	2WAFLUT	2WAFLUT
	# Subsamples, Dec.				0	0	0	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	2	0	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	52	1	55	2
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	53	1	68	1
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	45	2	49	2
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	51	3	47	2
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	38	2	53	1
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	46	0	45	0
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	55	1	55	1
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	47	0	51	1
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	50	1	39	0
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	37	1	45	2
12	WEEDAR 64 (1/100 X)+	8.4	g ae/ha	POST	45	0	53	1
	DURANGO (1/100 X)	8.4	g ae/ha					
13	WEEDAR 64 (1/200 X)+	4.2	g ae/ha	POST	49	4	49	3
	DURANGO (1/200 X)	4.2	g ae/ha					
14	WEEDAR 64 (1/400 X)+	2.1	g ae/ha	POST	45	2	45	2
	DURANGO (1/400 X)	2.1	g ae/ha					
15	UNTREATED CONTROL				52	2	44	3
	LSD (P=.05)				18.3	2.3	24.1	1.5
	Standard Deviation				12.8	1.6	16.9	1.1
	CV				28.9	151.12	36.35	94.3

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PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	53	54	55	56
	Weed Code							
	Crop Code				CPSAN	CPSAN	CPSAN	CPSAN
	Part Rated				PLANT 5	FRUIT	FRUIT	FRUIT
	Rating Data Type				FLOWERBUDS	US FANCY	US FANCY	GRADE 1
	Rating Unit				PERPLANT	TOTAL NO	TOTAL WT	TOTAL NO
	Rating Date				8/12/10	10/19/10	10/19/10	10/19/10
	Trt-Eval Interval				2WAFLUT	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				0	0	1	0
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	1	0	2	2
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	63	2	13	63
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	49	4	33.7	56
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	55	6	53.8	58
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	50	7	64.9	49
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	43	5	34.3	49
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	38	3	20.9	61
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	57	2	18.5	66
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	40	3	21.7	58
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	32	3	23.6	53
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	41	4	31	42
12	WEEDAR 64 (1/100 X)+	8.4	g ae/ha	POST	56	2	18.5	67
	DURANGO (1/100 X)	8.4	g ae/ha					
13	WEEDAR 64 (1/200 X)+	4.2	g ae/ha	POST	56	6	50.7	56
	DURANGO (1/200 X)	4.2	g ae/ha					
14	WEEDAR 64 (1/400 X)+	2.1	g ae/ha	POST	41	8	64.7	50
	DURANGO (1/400 X)	2.1	g ae/ha					
15	UNTREATED CONTROL				45	10	71.2	58
	LSD (P=.05)				20.3	4.4	36.76	18.9
	Standard Deviation				14.2	3.1	25.72	13.2
	CV				32.01	70.67	73.87	25.24

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PEPPERS - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: PEPPERHERBDRIFTW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	57	58	59
	Weed Code						
	Crop Code				CPSAN	CPSAN	CPSAN
	Part Rated				FRUIT	FRUIT	FRUIT
	Rating Data Type				GRADE 1	GRADE 2	GRADE 2
	Rating Unit				TOTAL WT	TOTAL NO	TOTAL WT
	Rating Date				10/19/10	10/19/10	10/19/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	0	1
1	WEEDAR 64 (1 X)	840	g ae/ha	POST	10.2	0	0
2	WEEDAR 64 (1/50 X)	16.8	g ae/ha	POST	258.9	0	1
3	WEEDAR 64 (1/100 X)	8.4	g ae/ha	POST	264.6	1	5
4	WEEDAR 64 (1/150 X)	5.6	g ae/ha	POST	252.5	2	6.5
5	WEEDAR 64 (1/200 X)	4.2	g ae/ha	POST	226.6	1	4.2
6	WEEDAR 64 (1/400 X)	2.1	g ae/ha	POST	223.1	2	7.8
7	CLARITY (1/50 X)	11.2	g ae/ha	POST	262.8	1	1.5
8	CLARITY (1/100 X)	5.6	g ae/ha	POST	295.9	1	3.2
9	CLARITY (1/150 X)	3.74	g ae/ha	POST	251.4	1	2.3
10	CLARITY (1/200 X)	2.8	g ae/ha	POST	243.1	1	3
11	CLARITY (1/400 X)	1.4	g ae/ha	POST	169.2	1	3.8
12	WEEDAR 64 (1/100 X)+ DURANGO (1/100 X)	8.4 8.4	g ae/ha g ae/ha	POST	270.4	1	3.3
13	WEEDAR 64 (1/200 X)+ DURANGO (1/200 X)	4.2 4.2	g ae/ha g ae/ha	POST	257	2	5.9
14	WEEDAR 64 (1/400 X)+ DURANGO (1/400 X)	2.1 2.1	g ae/ha g ae/ha	POST	215.7	2	6
15	UNTREATED CONTROL				249.4	0	0.3
	LSD (P=.05)				79.37	1.6	7.72
	Standard Deviation				55.54	1.1	5.4
	CV				24.14	129.23	150.65

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PUMPKINS - CROP TOLERANCE WITH PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan,Tim Koch, and Mabel Barinas
Investigator: Doug Doohan

Objective: To evaluate PRE and POST applied herbicides for weed control and crop tolerance in pumpkins.

TRIAL SUMMARY: Four herbicides were evaluated for crop tolerance, weed control, and total yield. Dual Magnum at 1.33 pts/A (PRE), and the split application of Strategy + Sandea (4 pt + 0.50 oz /A) POST provided the highest yield. Early significant plant injury was observed with Dual Magnum, (both rates), and Lorox (3#/A). A significant increase in pumpkin size over the untreated control was observed with Lorox at 3#/A.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Finalized
Trial Reliability: Reliable
Initiation Date: 6/17/2010
Planned Completion Date: 10/15/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	AGRASS	foxtail, crabgrass spp.	Setaria, Digitaria spp.
2	AMAXX	pigweed spp.	Amaranthus spp.
3	CYPES	yellow nutsedge	Cypertus esculentes L.
4	POROL	common purslane	Portulaca oleracea L.

Crop 1: CUUPE Pumpkin
Planting Date: 6/17/2010
Rate: 1 S/Row-FT
Row Spacing: 8 FT

Variety: Neon
Planting Method: Hand-planted
Depth: 0.5 IN
Seed Bed: Smooth

SITE AND DESIGN

Plot Width, Unit: 7 FT
Site Type: Level Field
Tillage Type: No Till

Plot Length, Unit: 20 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 16	% OM: 3.11	Texture: Silt Loam
% Silt: 72	pH: 6.86	Soil Name: Wooster Silt Loam
% Clay: 12	CEC: 8.5	Fert. Level: Moderate

APPLICATION DESCRIPTION

	A	B
Application Date:	6/18/2010	7/10/2010
Time of Day:	11:30 AM-12:30 PM	10:30 AM-11:30AM
Application Method:	Spray	Spray
Application Timing:	PRE	3 Leaf Stage
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	68.2 F	77.1 F
% Relative Humidity:	75.90%	63.50%

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PUMPKINS - CROP TOLERANCE WITH PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan,Tim Koch, and Mabel Barinas
Investigator: Doug Doohan

Wind Velocity, Unit:	4.6 MPH	3.8 MPH
Dew Presence (Y/N):	No	No
Soil Moisture:	Dry	Dry
% Cloud Cover:	0	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	CUUPE, PRE	CUUPE, POST
Stage Scale:	None	3 Leaf Stage
Height, Unit:	None	8 IN

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40	40
Nozzle Type:	Flat Fan	Flat Fan
Nozzle Size:	8002VS	8002VS
Nozzle Spacing, Unit:	15 IN	15 IN
Nozzles/Row:	4	4
Band Width, Unit:	5 FT	5 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.2 MPH	2.65 MPH
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

TRIAL COMMENTS:

The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100= death of crop/ complete weed control. For weed density: LOW = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot. All treatments except the weed-free control had a PRE herbicide, and weed control was very good across the board. We harvested 5 plants per plot in the row center, and weighed them in pounds.

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PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4
Weed Code								
Crop Code					CUUPE	CUUPE	CUUPE	CUUPE
Part Rated					PLANT	PLANT	PLANT	PLANT
Rating Data Type					STANDCOUNT	CHLOROSIS	STUNT	STANDCOUNT
Rating Unit					EACH	%	%	EACH
Rating Date					6/25/10	6/25/10	6/25/10	7/9/10
Trt-Eval Interval					1WATPRE	1WATPRE	1WATPRE	3WATPRE
# Subsamples, Dec.					0	0	0	0
1	WEED FREE CONTROL				17	0	0	20
2	DUAL MAGNUM	1.33	pt/a	PRE	15	5	21	19
3	DUAL MAGNUM	2.66	pt/a	PRE	7	8	35	19
4	LOROX	0.75	lb/a	PRE	16	4	10	19
5	LOROX	1.5	lb/a	PRE	16	5	8	20
6	LOROX	3	lb/a	PRE	17	10	16	17
7	STRATEGY	4	pt/a	PRE	14	6	16	19
8	STRATEGY+	4	pt/a	PRE	17	6	6	19
	SANDEA	0.5	oz/a	POST				
9	STRATEGY+	4	pt/a	PRE	16	8	10	20
	SANDEA+	0.5	oz/a	POST				
	NIS	1	pt/a	POST				
10	STRATEGY+	4	pt/a	PRE	17	5	4	19
	SANDEA	1	oz/a	POST				
11	STRATEGY+	4	pt/a	PRE	16	9	6	19
	SANDEA+	1	oz/a	POST				
	NIS	1	pt/a	POST				
LSD (P=.05)					4.0	6.4	11.2	2.0
Standard Deviation					2.8	4.4	7.8	1.4
CV					18.4	75.0	64.5	7.1

The Ohio State University

PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	5	6	7	8	9
	Weed Code						AGRASS	AMAXX	POROL
	Crop Code				CUUPE	CUUPE	CUUPE	CUUPE	CUUPE
	Part Rated				PLANT	PLANT	WEED	WEED	WEED
	Rating Data Type				CHLOROSIS	STUNT	CONTROL	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%
	Rating Date				7/9/10	7/9/10	7/9/10	7/9/10	7/9/10
	Trt-Eval Interval				3WATPRE	3WATPRE	3WATPRE	3WATPRE	3WATPRE
	# Subsamples, Dec.				0	0	0	0	0
1	WEED FREE CONTROL				0	0	99	99	99
2	DUAL MAGNUM	1.33	pt/a	PRE	0	0	99	99	99
3	DUAL MAGNUM	2.66	pt/a	PRE	0	31	99	99	99
4	LOROX	0.75	lb/a	PRE	0	0	99	99	99
5	LOROX	1.5	lb/a	PRE	0	13	99	99	99
6	LOROX	3	lb/a	PRE	0	24	99	99	99
7	STRATEGY	4	pt/a	PRE	1	5	99	99	99
8	STRATEGY+	4	pt/a	PRE	0	0	99	99	99
	SANDEA	0.5	oz/a	POST					
9	STRATEGY+	4	pt/a	PRE	0	10	99	99	99
	SANDEA+	0.5	oz/a	POST					
	NIS	1	pt/a	POST					
10	STRATEGY+	4	pt/a	PRE	0	8	99	99	99
	SANDEA	1	oz/a	POST					
11	STRATEGY+	4	pt/a	PRE	0	14	99	99	99
	SANDEA+	1	oz/a	POST					
	NIS	1	pt/a	POST					
	LSD (P=.05)				1.1	16.3	0	0	0
	Standard Deviation				0.8	11.3	0	0	0
	CV				663.3	119.5	0	0	0

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PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	10	11	12	13	14
	Weed Code				CYPES			AGRASS	AMAXX
	Crop Code				CUUPE	CUUPE	CUUPE	CUUPE	CUUPE
	Part Rated				WEED	PLANT	PLANT	WEED	WEED
	Rating Data Type				CONTROL	CHLOROSIS	STUNT	CONTROL	CONTROL
	Rating Unit				%	%	%	%	%
	Rating Date				7/9/10	7/30/10	7/30/10	7/30/10	7/30/10
	Trt-Eval Interval				3WATPRE	6WATPRE	6WATPRE	6WATPRE	6WATPRE
	# Subsamples, Dec.				0	0	0	0	0
1	WEED FREE CONTROL				99	0	0	99	99
2	DUAL MAGNUM	1.33	pt/a	PRE	99	6	0	99	80
3	DUAL MAGNUM	2.66	pt/a	PRE	99	6	1	99	99
4	LOROX	0.75	lb/a	PRE	0	5	0	75	87
5	LOROX	1.5	lb/a	PRE	0	5	0	75	99
6	LOROX	3	lb/a	PRE	99	5	1	97	99
7	STRATEGY	4	pt/a	PRE	99	5	0	94	82
8	STRATEGY+	4	pt/a	PRE	99				
	SANDEA	0.5	oz/a	POST					
9	STRATEGY+	4	pt/a	PRE	99				
	SANDEA+	0.5	oz/a	POST					
	NIS	1	pt/a	POST					
10	STRATEGY+	4	pt/a	PRE	99				
	SANDEA	1	oz/a	POST					
11	STRATEGY+	4	pt/a	PRE	99				
	SANDEA+	1	oz/a	POST					
	NIS	1	pt/a	POST					
	LSD (P=.05)				0	1.8	1.8	13.1	29.3
	Standard Deviation				0	1.2	1.2	8.9	19.7
	CV				0	26.3	341.6	9.7	21.4

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PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	15	16	17	18	19
	Weed Code				POROL	CYPES			AGRASS
	Crop Code				CUUPE	CUUPE	CUUPE	CUUPE	CUUPE
	Part Rated				WEED	WEED	PLANT	PLANT	WEED
	Rating Data Type				CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL
	Rating Unit				%	%	%	%	%
	Rating Date				7/30/10	7/30/10	7/16/10	7/16/10	7/16/10
	Trt-Eval Interval				6WATPRE	6WATPRE	1WATPOST	1WATPOST	1WATPOST
	# Subsamples, Dec.				0	0	0	0	0
1	WEED FREE CONTROL				99	99			
2	DUAL MAGNUM	1.33	pt/a	PRE	97	99			
3	DUAL MAGNUM	2.66	pt/a	PRE	99	99			
4	LOROX	0.75	lb/a	PRE	85	87			
5	LOROX	1.5	lb/a	PRE	94	87			
6	LOROX	3	lb/a	PRE	99	99			
7	STRATEGY	4	pt/a	PRE	99	99			
8	STRATEGY+	4	pt/a	PRE			9	0	99
	SANDEA	0.5	oz/a	POST					
9	STRATEGY+	4	pt/a	PRE			20	18	99
	SANDEA+	0.5	oz/a	POST					
	NIS	1	pt/a	POST					
10	STRATEGY+	4	pt/a	PRE			18	23	99
	SANDEA	1	oz/a	POST					
11	STRATEGY+	4	pt/a	PRE			21	21	99
	SANDEA+	1	oz/a	POST					
	NIS	1	pt/a	POST					
	LSD (P=.05)				13.8	17.8	3.5	18.4	0
	Standard Deviation				9.3	12.0	2.2	11.5	0
	CV				9.7	12.5	13.1	75.1	0

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PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	20	21	22	23	24
	Weed Code				AMAXX	POROL	CYPES		
	Crop Code				CUUPE	CUUPE	CUUPE	CUUPE	CUUPE
	Part Rated				WEED	WEED	WEED	PLANT	PLANT
	Rating Data Type				CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT
	Rating Unit				%	%	%	%	%
	Rating Date				7/16/10	7/16/10	7/16/10	7/30/10	7/30/10
	Trt-Eval Interval				1WATPOST	1WATPOST	1WATPOST	3WATPOST	3WATPOST
	# Subsamples, Dec.				0	0	0	0	0
1	WEED FREE CONTROL								
2	DUAL MAGNUM	1.33	pt/a	PRE					
3	DUAL MAGNUM	2.66	pt/a	PRE					
4	LOROX	0.75	lb/a	PRE					
5	LOROX	1.5	lb/a	PRE					
6	LOROX	3	lb/a	PRE					
7	STRATEGY	4	pt/a	PRE					
8	STRATEGY+	4	pt/a	PRE	99	99	99	8	0
	SANDEA	0.5	oz/a	POST					
9	STRATEGY+	4	pt/a	PRE	99	99	99	9	3
	SANDEA+	0.5	oz/a	POST					
	NIS	1	pt/a	POST					
10	STRATEGY+	4	pt/a	PRE	99	99	99	8	3
	SANDEA	1	oz/a	POST					
11	STRATEGY+	4	pt/a	PRE	99	99	99	8	6
	SANDEA+	1	oz/a	POST					
	NIS	1	pt/a	POST					
	LSD (P=.05)				0	0	0	4.7	8.2
	Standard Deviation				0	0	0	2.9	5.2
	CV				0	0	0	37.3	183.3

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PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	AGRASS CUUPE WEED CONTROL % 7/30/10 3WATPOST 0 25	AMAXX CUUPE WEED CONTROL % 7/30/10 3WATPOST 0 26	POROL CUUPE WEED CONTROL % 7/30/10 3WATPOST 0 27	CYPES CUUPE WEED CONTROL % 7/30/10 3WATPOST 0 28	CUUPE PLANT CHLOROSIS % 8/20/10 6WATPOST 0 29
1	WEED FREE CONTROL								
2	DUAL MAGNUM	1.33	pt/a	PRE					
3	DUAL MAGNUM	2.66	pt/a	PRE					
4	LOROX	0.75	lb/a	PRE					
5	LOROX	1.5	lb/a	PRE					
6	LOROX	3	lb/a	PRE					
7	STRATEGY	4	pt/a	PRE					
8	STRATEGY+	4	pt/a	PRE	99	99	99	99	6
	SANDEA	0.5	oz/a	POST					
9	STRATEGY+	4	pt/a	PRE	97	99	99	99	5
	SANDEA+	0.5	oz/a	POST					
	NIS	1	pt/a	POST					
10	STRATEGY+	4	pt/a	PRE	99	99	98	99	6
	SANDEA	1	oz/a	POST					
11	STRATEGY+	4	pt/a	PRE	99	99	99	99	5
	SANDEA+	1	oz/a	POST					
	NIS	1	pt/a	POST					
LSD (P=.05)					3.6	0	1.6	0	3.0
Standard Deviation					2.3	0	1.0	0	1.9
CV					2.3	0	1.0	0	33.1

The Ohio State University

PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	30	31	32	33	34
Weed Code						AGRASS	AMAXX	POROL	CYPES
Crop Code					CUUPE	CUUPE	CUUPE	CUUPE	CUUPE
Part Rated					PLANT	WEED	WEED	WEED	WEED
Rating Data Type					STUNT	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%
Rating Date					8/20/10	8/20/10	8/20/10	8/20/10	8/20/10
Trt-Eval Interval					6WATPOST	6WATPOST	6WATPOST	6WATPOST	6WATPOST
# Subsamples, Dec.					0	0	0	0	0
1	WEED FREE CONTROL								
2	DUAL MAGNUM	1.33	pt/a	PRE					
3	DUAL MAGNUM	2.66	pt/a	PRE					
4	LOROX	0.75	lb/a	PRE					
5	LOROX	1.5	lb/a	PRE					
6	LOROX	3	lb/a	PRE					
7	STRATEGY	4	pt/a	PRE					
8	STRATEGY+	4	pt/a	PRE	0	95	95	95	95
	SANDEA	0.5	oz/a	POST					
9	STRATEGY+	4	pt/a	PRE	0	90	94	94	94
	SANDEA+	0.5	oz/a	POST					
	NIS	1	pt/a	POST					
10	STRATEGY+	4	pt/a	PRE	0	95	96	96	96
	SANDEA	1	oz/a	POST					
11	STRATEGY+	4	pt/a	PRE	0	94	94	95	95
	SANDEA+	1	oz/a	POST					
	NIS	1	pt/a	POST					
LSD (P=.05)					0.0	4.2	4.0	2.7	2.7
Standard Deviation					0.0	2.6	2.5	1.7	1.7
CV					0.0	2.8	2.7	1.8	1.8

The Ohio State University

PUMPKINS - CROP TOLERANCE WITH
PRE AND POST HERBICIDES

Trial ID: PUMPKINW 2010
Location: Wooster, Ohio
Study Dir.: D. Doohan,T. Koch, and M. Barinas
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	35	36	37
Weed Code							
Crop Code					CUUPE	CUUPE	CUUPE
Part Rated					FRUIT	FRUIT	FRUIT
Rating Data Type					TOTAL NUMBER	TOTAL WEIGHT	AVE WEIGHT
Rating Unit					PER PLOT	LBS/PLOT	EACH/LBS
Rating Date					8/31/10	8/31/10	8/31/10
Trt-Eval Interval					HARVEST	HARVEST	HARVEST
# Subsamples, Dec.					0	1	1
1	WEED FREE CONTROL				7	39.8	5.9
2	DUAL MAGNUM	1.33	pt/a	PRE	7	45.3	6.4
3	DUAL MAGNUM	2.66	pt/a	PRE	8	44.9	5.5
4	LOROX	0.75	lb/a	PRE	7	41.6	6.7
5	LOROX	1.5	lb/a	PRE	6	37.1	6.2
6	LOROX	3	lb/a	PRE	5	39.4	7.4
7	STRATEGY	4	pt/a	PRE	7	43.0	6.6
8	STRATEGY+	4	pt/a	PRE	7	45.1	6.4
	SANDEA	0.5	oz/a	POST			
9	STRATEGY+	4	pt/a	PRE	6	35.1	6.1
	SANDEA+	0.5	oz/a	POST			
	NIS	1	pt/a	POST			
10	STRATEGY+	4	pt/a	PRE	6	36.3	6.1
	SANDEA	1	oz/a	POST			
11	STRATEGY+	4	pt/a	PRE	6	34.0	6.2
	SANDEA+	1	oz/a	POST			
	NIS	1	pt/a	POST			
LSD (P=.05)					1.6	9.8	1.5
Standard Deviation					1.1	6.8	1.0
CV					17.0	16.9	15.9

The Ohio State University

RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan, Tim Koch and Connie Echaiz
Investigator: Doug Doohan

Objective: To evaluate fall applied herbicides for crop injury and weed control.

TRIAL SUMMARY: Treatments were applied on 12/4/09. Plants were rated visually for crop injury and weed control in the spring of 2010. Matrix at 4 and 8 oz/A provided the best overall weed control at 4 and 5 months after application; however the high rate caused significant injury.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 12/4/2009
Planned Completion Date: 6/30/2010

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
	1 AGGRE	quackgrass	*Elytrigia repens*
	2 CERVU	mouseear chickweed	*Cerastium fontanum*
	3 TAROF	dandelion	*Taraxacum officinale*
	4 GLEHE	ground ivy	*Glechoma hederacea*
	5 CIRAR	Canada thistle	*Cirsium arvense*

Crop 1: RUBID Red Raspberry
Planting Date:'5/15/2007
Rate: 1 plant per 3 ft
Row Spacing: 10 FT
Perennial Age: 3 Years
Soil Temperature: 40.8 F

Variety: Encore
Planting Method: Hand-Planted
Depth: 6 IN
Spacing Within Row: 3 FT
Seed Bed: Smooth
Soil Moisture: Normal

SITE AND DESIGN

Plot Width, Unit: 6 FT
Site Type: Field
Tillage Type: Conventional

Plot Length, Unit: 20 FT
Reps: 3
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 11
% Silt: 75
% Clay: 14

% OM: 3
pH: 6
CEC:12

Texture: Silt Loam
Soil Name: Wooster Silt Loam
Fert. Level: Good

The Ohio State University

RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan, Tim Koch and Connie Echaiz
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A
Application Date:	12/4/2009
Time of Day:	3-4 PM
Application Method:	Spray
Application Timing:	DORMANT
Applic. Placement:	BRODIR
Air Temp., Unit:	34.4 F
% Relative Humidity:	51.8
Wind Velocity, Unit:	8.6
Dew Presence (Y/N):	N
Soil Temp., Unit:	40.8
Soil Moisture:	Adequate
% Cloud Cover:	80

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	RUBID
Stage Scale:	Dormant
Height, Unit:	3 FT

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AGGRE, None
Stage Scale:	None
Density, Unit:	None
Weed 2 Code, Stage:	CERVU, None
Stage Scale:	None
Density, Unit:	None
Weed 3 Code, Stage:	TAROF, None
Stage Scale:	None
Density, Unit:	None
Weed 4 Code, Stage:	GLEHE, None
Stage Scale:	None
Density, Unit:	None
Weed 5 Code, Stage:	CIRAR, None
Stage Scale:	None
Density, Unit:	None

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40
Nozzle Type:	Single
Nozzle Size:	8002 US
Nozzles/Row:	1
Band Width, Unit:	18 IN

The Ohio State University

RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan, Tim Koch and Connie Echaiz
Investigator: Doug Doohan

Boom Height, Unit:	18 IN
Ground Speed, Unit:	2.7 MPH
Spray Volume, Unit:	25 GPA
Propellant:	CO2

TRIAL COMMENTS

The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100 = death of crop/complete weed control. For weed density: L0W = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot.

The Ohio State University

RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
Weed Code					AGGRE	CERVU	TAROF	GLEHE
Crop Code				RUBID	RUBID	RUBID	RUBID	RUBID
Part Rated				PLANT	WEED	WEED	WEED	WEED
Rating Data Type				INJURY	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				3/24/10	3/24/10	3/24/10	3/24/10	3/24/10
Trt-Eval Interval				4MOSAT	4MOSAT	4MOSAT	4MOSAT	4MOSAT
# Subsamples, Dec.				0	0	0	0	0
UNTREATED CONTROL				0	0	0	0	0
CHATEAU+	3	oz/a	DORMANT	0	0	66	66	99
NIS+	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
CHATEAU+	6	oz/a	DORMANT	0	0	99	96	66
NIS	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	4	oz/a	DORMANT	0	0	33	99	99
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	8	oz/a	DORMANT	0	33	99	83	66
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	16	oz/a	DORMANT	0	33	66	88	33
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
MATRIX+	4	oz/a	DORMANT	0	93	99	99	99
NIS	0.5	pt/a	DORMANT					
MATRIX+	8	oz/a	DORMANT	0	95	94	99	99
NIS	0.5	pt/a	DORMANT					
SINBAR	1.25	lb/a	DORMANT	0	33	0	0	99
SINBAR	1.25	lb/a	DORMANT	0	32	83	33	99
STINGER	0.66	pt/a	DORMANT	0	0	33	89	99
STINGER	1.33	pt/a	DORMANT	0	0	65	83	66
LSD (P=.05)				0	46.7	65.3	47.1	53.9
Standard Deviation				0	27.6	38.6	27.8	31.9
CV				0	103.87	62.83	40	41.37

The Ohio State University

RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9	10
Weed Code				CIRAR		AGGRE	CERVU	TAROF
Crop Code				RUBID	RUBID	RUBID	RUBID	RUBID
Part Rated				WEED	PLANT	WEED	WEED	WEED
Rating Data Type				CONTROL	INJURY	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				3/24/10	4/14/10	4/14/10	4/14/10	4/14/10
Trt-Eval Interval				4MOSAT	5MOSAT	5MOSAT	5MOSAT	5MOSAT
# Subsamples, Dec.				0	0	0	0	0
UNTREATED CONTROL				0	0	0	0	0
CHATEAU+	3	oz/a	DORMANT	99	0	60	100	57
NIS+	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
CHATEAU+	6	oz/a	DORMANT	99	0	80	100	57
NIS	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	4	oz/a	DORMANT	99	0	83	100	53
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	8	oz/a	DORMANT	93	0	67	100	57
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	16	oz/a	DORMANT	85	0	57	100	60
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
MATRIX+	4	oz/a	DORMANT	66	7	100	100	100
NIS	0.5	pt/a	DORMANT					
MATRIX+	8	oz/a	DORMANT	99	17	97	100	100
NIS	0.5	pt/a	DORMANT					
SINBAR	1.25	lb/a	DORMANT	60	0	83	100	33
SINBAR	1.25	lb/a	DORMANT	66	7	80	100	60
STINGER	0.66	pt/a	DORMANT	99	0	50	100	87
STINGER	1.33	pt/a	DORMANT	93	0	87	100	60
LSD (P=.05)				48	16.1	48.7	0	59.7
Standard Deviation				28.3	9.5	28.7	0	35.3
CV				35.53	379.79	40.88	0	58.51

The Ohio State University

RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				GLEHE	CIRAR		AGGRE	CERVU
Crop Code				RUBID	RUBID	RUBID	RUBID	RUBID
Part Rated				WEED	WEED	PLANT	WEED	WEED
Rating Data Type				CONTROL	CONTROL	INJURY	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				4/14/10	4/14/10	4/23/10	4/23/10	4/23/10
Trt-Eval Interval				5MOSAT	5MOSAT	5MOSAT	5MOSAT	5MOSAT
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	11	12	13	14	15
UNTREATED CONTROL				0	0	0	0	0
CHATEAU+	3	oz/a	DORMANT	100	57	0	13	66
NIS+	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
CHATEAU+	6	oz/a	DORMANT	67	60	0	0	66
NIS	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	4	oz/a	DORMANT	100	87	0	33	66
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	8	oz/a	DORMANT	67	87	0	27	67
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	16	oz/a	DORMANT	33	93	0	0	63
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
MATRIX+	4	oz/a	DORMANT	100	33	0	93	98
NIS	0.5	pt/a	DORMANT					
MATRIX+	8	oz/a	DORMANT	67	97	0	93	81
NIS	0.5	pt/a	DORMANT					
SINBAR	1.25	lb/a	DORMANT	100	87	0	0	99
SINBAR	1.25	lb/a	DORMANT	100	67	0	0	95
STINGER	0.66	pt/a	DORMANT	93	90	0	0	99
STINGER	1.33	pt/a	DORMANT	100	93	0	0	99
LSD (P=.05)				54.2	49.8	0	38.5	59.8
Standard Deviation				32	29.4	0	22.7	35.3
CV				41.48	41.52	0	105.38	47.13

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RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				TAROF	GLEHE	CIRAR		AGGRE
Crop Code				RUBID	RUBID	RUBID	RUBID	RUBID
Part Rated				WEED	WEED	WEED	PLANT	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	INJURY	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				4/23/10	4/23/10	4/23/10	5/23/10	5/23/10
Trt-Eval Interval				5MOSAT	5MOSAT	5MOSAT	6MOSAT	6MOSAT
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	16	17	18	19	20
UNTREATED CONTROL				0	0	0	0	0
CHATEAU+	3	oz/a	DORMANT	0	100	43	0	0
NIS+	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
CHATEAU+	6	oz/a	DORMANT	0	67	40	0	0
NIS	0.5	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	4	oz/a	DORMANT	17	100	17	0	0
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	8	oz/a	DORMANT	58	67	73	0	0
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
DRIVE+	16	oz/a	DORMANT	73	33	100	0	0
MSO+	2	pt/a	DORMANT					
UAN	5	pt/a	DORMANT					
MATRIX+	4	oz/a	DORMANT	98	100	50	0	99
NIS	0.5	pt/a	DORMANT					
MATRIX+	8	oz/a	DORMANT	100	67	95	0	94
NIS	0.5	pt/a	DORMANT					
SINBAR	1.25	lb/a	DORMANT	30	100	0	0	0
SINBAR	1.25	lb/a	DORMANT	28	100	66	0	0
STINGER	0.66	pt/a	DORMANT	28	93	37	0	0
STINGER	1.33	pt/a	DORMANT	70	100	63	0	0
LSD (P=.05)				56.2	54.2	48.7	0	4
Standard Deviation				33.2	32	28.8	0	2.3
CV				79.16	41.48	59.11	0	14.48

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RASPBERRIES, RED - WEED CONTROL WITH FALL APPLIED MATRIX, SINBAR, AND DRIVE

Trial ID: RRWCFALLMSDW 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				CERVU	TAROF	CIRAR
Crop Code				RUBID	RUBID	RUBID
Part Rated				WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%
Rating Date				5/23/10	5/23/10	5/23/10
Trt-Eval Interval				6MOSAT	6MOSAT	6MOSAT
# Subsamples, Dec.				0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	21	22	23
UNTREATED CONTROL				0	0	0
CHATEAU+	3	oz/a	DORMANT	33	0	0
NIS+	0.5	pt/a	DORMANT			
UAN	5	pt/a	DORMANT			
CHATEAU+	6	oz/a	DORMANT	66	0	5
NIS	0.5	pt/a	DORMANT			
UAN	5	pt/a	DORMANT			
DRIVE+	4	oz/a	DORMANT	33	0	0
MSO+	2	pt/a	DORMANT			
UAN	5	pt/a	DORMANT			
DRIVE+	8	oz/a	DORMANT	33	10	3
MSO+	2	pt/a	DORMANT			
UAN	5	pt/a	DORMANT			
DRIVE+	16	oz/a	DORMANT	33	66	33
MSO+	2	pt/a	DORMANT			
UAN	5	pt/a	DORMANT			
MATRIX+	4	oz/a	DORMANT	83	86	30
NIS	0.5	pt/a	DORMANT			
MATRIX+	8	oz/a	DORMANT	94	99	43
NIS	0.5	pt/a	DORMANT			
SINBAR	1.25	lb/a	DORMANT	0	0	0
SINBAR	1.25	lb/a	DORMANT	0	0	0
STINGER	0.66	pt/a	DORMANT	0	0	0
STINGER	1.33	pt/a	DORMANT	0	0	0
LSD (P=.05)				62.9	31	36.2
Standard Deviation				37.1	18.3	21.4
CV				118.8	84.22	222.98

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: To evaluate PRE and POST herbicides for control of late emerging annual grass in sweet corn.

TRIAL SUMMARY: This trial had 6 pre-emergence and 5 post-emergence treatments. The top 3 treatments for longevity of fall panicum control and crop safety were: Bicep 11 Magnum (1.6 qt) applied PRE, Dual Magnum (1.33 pt) + Atrazine (1 pt) applied PRE, and Accent Q (0.9 oz)+ MSO (2 pt)+ UAN (1.5 qt) applied POST.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	AMARE	Pigweed spp.	*Amaranthus retroflexus*
2	PANDI	Fall panicum	*Panicum dichotomiflorum*

Crop 1: ZEAMS Sweet Corn
Planting Date: 6/12/2010
Rate: 24,000 S/A
Row Spacing: 30 IN
Soil Temperature: 70.6 F
Emergence Date: 6/21/2010

Variety: Primus
Depth: 1.5"
Spacing Within Row: 6"
Soil Moisture: Normal
Seed Bed: Smooth
Planting Method: No-Till

SITE AND DESIGN

Plot Width, Unit: 6 FT
Site Type: Field
Tillage Type: No-Till

Plot Length, Unit: 25 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 16
% Silt: 72
% Clay: 12

% OM: 1.8
pH: 6.4

Texture: Silt Loam
Soil Name: Mechanicsburg Silt Loam
Fertility Level: Moderate

APPLICATION DESCRIPTION

	A	B
Application Date:	6/14/2010	7/6/2010
Time of Day:	10-11 AM	10-1130AM
Application Method:	Spray	Spray
Application Timing:	PRE	POST
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	75 F	85.4 F
% Relative Humidity:	85.6	68.1
Wind Velocity, Unit:	5.7 MPH	3 MPH

The Ohio State University

SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Dew Presence (Y/N):	N	N
Soil Temp., Unit:	70.6 F	
Soil Moisture:	Moist	Moist
% Cloud Cover:	70	50

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	ZEAMS, PRE	ZEAMS, POST
Stage Scale:	None	V3/V4
Height, Unit:	None	12 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AMARE, PRE	AMARE, POST
Stage Scale:	None	4-6 IN
Density, Unit:	None	Medium, Plot
Weed 2 Code, Stage:	PANDI, PRE	PANDI, POST
Stage Scale:	None	3-4 IN
Density, Unit:	None	Medium, Plot

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40	40
Nozzle Type:	Flat Fan	Flat Fan
Nozzle Size:	8002VS	8002VS
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	4	4
Band Width, Unit:	6 FT	6 FT
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	2.7 MPH	2.7 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

TRIAL COMMENTS:

Fall panicum was the predominant grass species. Sweet corn was not harvested.
Visual observations were taken at 1, 3, and 6 weeks after each application. The 0-100 linear scale was used, in which 0 = 0 crop injury/no control, and 100= death of crop/ complete weed control.
For weed density: LOW = occasional weed ; MEDIUM = 3 weeds per square foot ; HIGH = > 3 weeds per square foot.

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code						PANDI	AMARE	
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS
Rating Unit				%	%	%	%	%
Rating Date				6/21/10	6/21/10	6/21/10	6/21/10	7/5/10
Trt-Eval Interval				1 WATPRE	1 WATPRE	1 WATPRE	1WATPRE	3 WATPRE
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
WEEDY CONTROL				0	0	0	0	0
WEED FREE CONTROL				0	0	0	0	0
DEGREE XTRA	3	qt/a	PRE	0	0	93	100	0
GUARDSMAN MAX	4	pt/a	PRE	0	0	100	100	0
PROWL H2O +	3	pt/a	PRE	0	0	88	100	0
ATRAZINE	1	pt/a	PRE					
BICEP 11 MAGNUM	1.6	qt/a	PRE	0	0	100	100	0
DUAL II MAGNUM+	1.33	pt/a	PRE	0	0	99	100	0
ATRAZINE	1	pt/a	PRE					
LUMAX	3	pt/a	PRE					0
ACCENT Q +	0.9	oz/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
IMPACT+	0.75	fl oz/a	POST					
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					
IMPACT+	1	fl oz/a	POST					
ATRAZINE+	1	pt/a	POST					
UAN 28%	5	pt/a	POST					
LAUDIS+	3	fl oz/a	POST					
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code						PANDI	AMARE	
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CHLOROSIS	STUNT	CONTROL	CONTROL	CHLOROSIS
Rating Unit				%	%	%	%	%
Rating Date				6/21/10	6/21/10	6/21/10	6/21/10	7/5/10
Trt-Eval Interval				1 WATPRE	1 WATPRE	1 WATPRE	1WATPRE	3 WATPRE
# Subsamples, Dec.				0	0	0	0	0
Treatment	Product	Product	Growth					
Name	Rate	Rate Unit	Stage	1	2	3	4	5
OPTION	0.75	oz/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
LSD (P=.05)				0	0	4.3	0	0
Standard Deviation				0	0	2.9	0	0
CV				0	0	4.25	0	0

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code					PANDI	AMARE		
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT
Rating Unit				%	%	%	%	%
Rating Date				7/5/10	7/5/10	7/5/10	7/26/10	7/26/10
Trt-Eval Interval				3 WATPRE	3 WATPRE	3 WATPRE	6 WATPRE	6 WATPRE
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9	10
WEEDY CONTROL				0	0	0	4	0
WEED FREE CONTROL				0	100	100	0	0
DEGREE XTRA	3	qt/a	PRE	0	78	100	0	1
GUARDSMAN MAX	4	pt/a	PRE	0	95	100	0	1
PROWL H2O +	3	pt/a	PRE	0	81	100	3	5
ATRAZINE	1	pt/a	PRE					
BICEP 11 MAGNUM	1.6	qt/a	PRE	0	91	100	0	0
DUAL II MAGNUM+	1.33	pt/a	PRE	0	90	100	0	0
ATRAZINE	1	pt/a	PRE					
LUMAX	3	pt/a	PRE	0	79	99	0	0
ACCENT Q +	0.9	oz/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
IMPACT+	0.75	fl oz/a	POST					
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					
IMPACT+	1	fl oz/a	POST					
ATRAZINE+	1	pt/a	POST					
UAN 28%	5	pt/a	POST					
LAUDIS+	3	fl oz/a	POST					
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code					PANDI	AMARE		
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				STUNT	CONTROL	CONTROL	CHLOROSIS	STUNT
Rating Unit				%	%	%	%	%
Rating Date				7/5/10	7/5/10	7/5/10	7/26/10	7/26/10
Trt-Eval Interval				3 WATPRE	3 WATPRE	3 WATPRE	6 WATPRE	6 WATPRE
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9	10
OPTION	0.75	oz/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
LSD (P=.05)				0	8.8	1.3	4.8	3.4
Standard Deviation				0	6	0.9	3.3	2.3
CV				0	7.84	1.01	416.8	243.4

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code				PANDI	AMARE			
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CONTROL	CONTROL	CHLOROSIS	STUNT	BURN
Rating Unit				%	%	%	%	%
Rating Date				7/26/10	7/26/10	7/13/10	7/13/10	7/13/10
Trt-Eval Interval				6 WATPRE	6 WATPRE	1WATPOST	1WATPOST	1WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	11	12	13	14	15
WEEDY CONTROL				0	0			
WEED FREE CONTROL				100	100			
DEGREE XTRA	3	qt/a	PRE	64	100			
GUARDSMAN MAX	4	pt/a	PRE	79	97			
PROWL H2O +	3	pt/a	PRE	75	66			
ATRAZINE	1	pt/a	PRE					
BICEP 11 MAGNUM	1.6	qt/a	PRE	85	99			
DUAL II MAGNUM+	1.33	pt/a	PRE	83	98			
ATRAZINE	1	pt/a	PRE					
LUMAX	3	pt/a	PRE	69	97			
ACCENT Q +	0.9	oz/a	POST			9	15	0
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
IMPACT+	0.75	fl oz/a	POST			0	1	0
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					
IMPACT+	1	fl oz/a	POST			0	0	0
ATRAZINE+	1	pt/a	POST					
UAN 28%	5	pt/a	POST					
LAUDIS+	3	fl oz/a	POST			0	13	0
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code				PANDI	AMARE			
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CONTROL	CONTROL	CHLOROSIS	STUNT	BURN
Rating Unit				%	%	%	%	%
Rating Date				7/26/10	7/26/10	7/13/10	7/13/10	7/13/10
Trt-Eval Interval				6 WATPRE	6 WATPRE	1WATPOST	1WATPOST	1WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	11	12	13	14	15
OPTION	0.75	oz/a	POST			10	18	0
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
LSD (P=.05)				12.1	12.3	1.7	5.7	0
Standard Deviation				8.2	8.3	1.1	3.7	0
CV				11.8	10.1	29.8	40.1	0

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SWEET CORN - LATE EMERGING ANNUAL GRASS CONTROL

Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code				PANDI	AMARE			
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CONTROL	CONTROL	CHLOROSIS	STUNT	BURN
Rating Unit				%	%	%	%	%
Rating Date				7/13/10	7/13/10	7/27/10	7/27/10	7/27/10
Trt-Eval Interval				1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	16	17	18	19	20
WEEDY CONTROL								
WEED FREE CONTROL								
DEGREE XTRA	3	qt/a	PRE					
GUARDSMAN MAX	4	pt/a	PRE					
PROWL H2O +	3	pt/a	PRE					
ATRAZINE	1	pt/a	PRE					
BICEP 11 MAGNUM	1.6	qt/a	PRE					
DUAL II MAGNUM+	1.33	pt/a	PRE					
ATRAZINE	1	pt/a	PRE					
LUMAX	3	pt/a	PRE					
ACCENT Q +	0.9	oz/a	POST	81	99	1	8	0
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
IMPACT+	0.75	fl oz/a	POST	78	99	0	0	0
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					
IMPACT+	1	fl oz/a	POST	76	99	0	1	0
ATRAZINE+	1	pt/a	POST					
UAN 28%	5	pt/a	POST					
LAUDIS+	3	fl oz/a	POST	10	99	0	3	0
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					

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Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
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Weed Code				PANDI	AMARE			
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CONTROL	CONTROL	CHLOROSIS	STUNT	BURN
Rating Unit				%	%	%	%	%
Rating Date				7/13/10	7/13/10	7/27/10	7/27/10	7/27/10
Trt-Eval Interval				1WATPOST	1WATPOST	3WATPOST	3WATPOST	3WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	16	17	18	19	20
OPTION	0.75	oz/a	POST	83	99	0	4	0
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
LSD (P=.05)				9.4	0	1.7	7.1	0
Standard Deviation				6.1	0	1.1	4.6	0
CV				9.29	0	447.2	154.4	0

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Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code				PANDI	AMARE		PANDI	AMARE
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	WEED	WEED
Rating Data Type				CONTROL	CONTROL	STUNT	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				7/27/10	7/27/10	8/17/10	8/17/10	8/17/10
Trt-Eval Interval				3WATPOST	3WATPOST	6WATPOST	6WATPOST	6WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	21	22	23	24	25
WEEDY CONTROL								
WEED FREE CONTROL								
DEGREE XTRA	3	qt/a	PRE					
GUARDSMAN MAX	4	pt/a	PRE					
PROWL H2O +	3	pt/a	PRE					
ATRAZINE	1	pt/a	PRE					
BICEP 11 MAGNUM	1.6	qt/a	PRE					
DUAL II MAGNUM+	1.33	pt/a	PRE					
ATRAZINE	1	pt/a	PRE					
LUMAX	3	pt/a	PRE					
ACCENT Q +	0.9	oz/a	POST	91	98	0	89	95
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
IMPACT+	0.75	fl oz/a	POST	64	92	0	78	93
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					
IMPACT+	1	fl oz/a	POST	40	99	0	43	99
ATRAZINE+	1	pt/a	POST					
UAN 28%	5	pt/a	POST					
LAUDIS+	3	fl oz/a	POST	36	99	0	20	99
ATRAZINE+	1	pt/a	POST					
MSO+	2	pt/a	POST					
UAN 28%	5	pt/a	POST					

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Trial ID: SWCNLEAGC2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and
Investigator: Doug Doohan

Weed Code				PANDI	AMARE		PANDI	AMARE
Crop Code				ZEAMS	ZEAMS	ZEAMS	ZEAMS	ZEAMS
Part Rated				PLANT	PLANT	PLANT	WEED	WEED
Rating Data Type				CONTROL	CONTROL	STUNT	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				7/27/10	7/27/10	8/17/10	8/17/10	8/17/10
Trt-Eval Interval				3WATPOST	3WATPOST	6WATPOST	6WATPOST	6WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	21	22	23	24	25
OPTION	0.75	oz/a	POST	84	97	0	75	81
MSO+	2	pt/a	POST					
UAN 28%	1.5	qt/a	POST					
LSD (P=.05)				32.5	9.9	0	11.3	11.1
Standard Deviation				21.1	6.5	0	7.3	7.2
CV				33.4	6.7	0	12.1	7.7

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: The objective of this experiment was to determine the impact of low rates of 2, 4-D and dicamba on processing tomatoes grown in Indiana and Ohio.

TRIAL SUMMARY: This trial had 2 varieties, H3402 and H9364. Two herbicides were used: 2,4-D (Weedar 64), and dicamba (Clarity). Rates used were 1/300, 1/100, and 1/30 of the standard field rate for soybeans for each chemical. There were 2 application timings: 2 weeks after transplant (2WATP), and 5 weeks after transplant (5WATP). Early drift caused more visible injury to the crop, but the plants recovered and yield was not affected. Later drift caused less noticeable symtoms but caused significant effect on yield. Dicamba is more injurious than 2, 4-D. Yield can be significantly reduced with as little as 1/30 of the field rate of these herbicides.

TRIAL LOCATION

City: Wooster
State/Prov.: OH
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 6/17/10
Planned Completion Date: 10/15/10

CROP AND WEED DESCRIPTION

Crop 1: LYPES — Processing Tomato
Variety: H3402 & H9364
Planting Date: 6/9/2009
Planting Method: Machine Transplanted
Rate: 1 Plant/18"
Depth: 3 IN
Row Spacing: 5 FT
Spacing Within Row: 18 IN
Seed Bed: Conventional
Soil Moisture: Moist

SITE AND DESIGN

Plot Width, Unit: 5 FT
Plot Length, Unit: 25 FT
Site Type: Field
Reps: 4
Tillage Type: Conventional
Study Design: SPLPLO

SOIL DESCRIPTION

% Sand: 16	% OM: 3.11	Texture: Silt Loam
% Silt: 72	pH: 6.86	Soil Name: Wooster Silt Loam
% Clay: 12	CEC: 8.5	Fert. Level: Moderate

APPLICATION DESCRIPTION

	A	B
Application Date:	6/30/2010	7/19/2010
Time of Day:	9-9:40 AM	10-11 AM
Application Method:	Spray	Spray
Application Timing:	2WATP	5WATP
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	64.6 F	76.3 F
% Relative Humidity:	71.9	89.2

The Ohio State University

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Trial ID: TOM24DDICAMBA 2010
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Wind Velocity, Unit:	6.4 MPH	6.9 MPH
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	69.7 F	76.5 F
Soil Moisture:	Moist	Dry
% Cloud Cover:	20	30

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	LYPES, 2WATP	LYPES, 5WATP
Stage Scale:	Vegetative	Early bloom
Height, Unit:	6 IN	12 IN

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40	40
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8002VS	8002VS
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	2	2
Band Width, Unit:	36 IN	36 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	2.7 MPH	2.7 MPH
Carrier:	H20	H20
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

TRIAL COMMENTS:

Column 27 refers to late bloom initiated by herbicide injury compared to the untreated control plots. Harvest timing was based on a minimum of 75% red fruit in the untreated controls. We harvested 5 plants per plot, sorted the fruit by color, and weighed the fruit in pounds. Harvest timing was good in that there were no rotten or cull fruit.
We also took a 30 fruit (red) subsample to observe any differences in size among treatments.

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	LEAF	STEM	LEAF	PLANT	PLANT
	Rating Data Type				DROOP	CURL	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/3/10	7/3/10	7/7/10	7/7/10	7/7/10	7/7/10
	Trt-Eval Interval				3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	TIMING 1			2WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H3402									
2	TIMING 1			2WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H9364									
3	TIMING 1			2WATP	4	0	3	6	11	14
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
4	TIMING 1			2WATP	0	0	18	18	20	25
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
5	TIMING 1			2WATP	5	9	28	14	29	36
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
6	TIMING 1			2WATP	5	11	43	31	40	46
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
7	TIMING 1			2WATP	59	71	30	16	34	50
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	LEAF	STEM	LEAF	PLANT	PLANT
	Rating Data Type				DROOP	CURL	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/3/10	7/3/10	7/7/10	7/7/10	7/7/10	7/7/10
	Trt-Eval Interval				3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
8	TIMING 1			2WATP	59	58	48	28	50	56
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
9	TIMING 1			2WATP	5	3	3	6	8	13
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
10	TIMING 1			2WATP	3	3	23	19	23	31
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
11	TIMING 1			2WATP	14	14	19	8	16	28
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
12	TIMING 1			2WATP	23	21	21	16	31	39
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
13	TIMING 1			2WATP	60	80	35	14	33	43
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
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Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	LEAF	STEM	LEAF	PLANT	PLANT
	Rating Data Type				DROOP	CURL	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/3/10	7/3/10	7/7/10	7/7/10	7/7/10	7/7/10
	Trt-Eval Interval				3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
14	TIMING 1			2WATP	60	83	44	24	43	46
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
15	TIMING 2			5WATP						
	UNTREATED CONTROL									
	H3402									
16	TIMING 2			5WATP						
	UNTREATED CONTROL									
	H9364									
17	TIMING 2			5WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
18	TIMING 2			5WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
19	TIMING 2			5WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
20	TIMING 2			5WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

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SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
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Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	LEAF	STEM	LEAF	PLANT	PLANT
	Rating Data Type				DROOP	CURL	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/3/10	7/3/10	7/7/10	7/7/10	7/7/10	7/7/10
	Trt-Eval Interval				3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
21	TIMING 2			5WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
22	TIMING 2			5WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
23	TIMING 2			5WATP						
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
24	TIMING 2			5WATP						
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
25	TIMING 2			5WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
26	TIMING 2			5WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

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Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated					PLANT	LEAF	STEM	LEAF	PLANT	PLANT
Rating Data Type					DROOP	CURL	TWIST	CURL	STUNT	INJURY
Rating Unit					%	%	%	%	%	%
Rating Date					7/3/10	7/3/10	7/7/10	7/7/10	7/7/10	7/7/10
Trt-Eval Interval					3 DAT	3 DAT	7 DAT	7 DAT	7 DAT	7 DAT
# Subsamples, Dec.					0	0	0	0	0	0
27	TIMING 2			5WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
28	TIMING 2			5WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
LSD (P=.05)					4.4	4.8	8.8	7	5.6	4
Standard Deviation					3.1	3.4	6.2	4.9	3.9	2.8
CV					14.76	13.36	27.84	34.42	16.42	9.09

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11	12
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/14/10	7/14/10	7/14/10	7/14/10	7/21/10	7/21/10
	Trt-Eval Interval				14 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	TIMING 1			2WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H3402									
2	TIMING 1			2WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H9364									
3	TIMING 1			2WATP	3	6	9	10	0	4
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
4	TIMING 1			2WATP	4	11	10	13	4	6
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
5	TIMING 1			2WATP	8	24	21	29	8	18
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
6	TIMING 1			2WATP	18	35	28	39	11	20
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
7	TIMING 1			2WATP	18	44	51	58	15	25
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11	12
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/14/10	7/14/10	7/14/10	7/14/10	7/21/10	7/21/10
	Trt-Eval Interval				14 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
8	TIMING 1			2WATP	26	61	66	69	38	50
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
9	TIMING 1			2WATP	0	5	6	9	0	4
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
10	TIMING 1			2WATP	5	6	10	11	5	8
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
11	TIMING 1			2WATP	4	15	15	18	0	8
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
12	TIMING 1			2WATP	14	21	28	34	10	9
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
13	TIMING 1			2WATP	20	19	35	46	13	14
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11	12
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/14/10	7/14/10	7/14/10	7/14/10	7/21/10	7/21/10
	Trt-Eval Interval				14 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
14	TIMING 1			2WATP	33	26	53	61	23	20
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
15	TIMING 2			5WATP						
	UNTREATED CONTROL									
	H3402									
16	TIMING 2			5WATP						
	UNTREATED CONTROL									
	H9364									
17	TIMING 2			5WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
18	TIMING 2			5WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
19	TIMING 2			5WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
20	TIMING 2			5WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11	12
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/14/10	7/14/10	7/14/10	7/14/10	7/21/10	7/21/10
	Trt-Eval Interval				14 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
21	TIMING 2			5WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
22	TIMING 2			5WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
23	TIMING 2			5WATP						
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
24	TIMING 2			5WATP						
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
25	TIMING 2			5WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
26	TIMING 2			5WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11	12
Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated					STEM	LEAF	PLANT	PLANT	STEM	LEAF
Rating Data Type					TWIST	CURL	STUNT	INJURY	TWIST	CURL
Rating Unit					%	%	%	%	%	%
Rating Date					7/14/10	7/14/10	7/14/10	7/14/10	7/21/10	7/21/10
Trt-Eval Interval					14 DAT	14 DAT	14 DAT	14 DAT	21 DAT	21 DAT
# Subsamples, Dec.					0	0	0	0	0	0
27	TIMING 2			5WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
28	TIMING 2			5WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
LSD (P=.05)					5.9	4.3	5.5	4.8	6.5	5.2
Standard Deviation					4.1	3	3.9	3.3	4.5	3.6
CV					38.27	15.35	16.34	11.84	50.57	27.65

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15	16	17	18
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	STEM	LEAF	PLANT	PLANT
	Rating Data Type				STUNT	INJURY	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/21/10	7/21/10	8/12/10	8/12/10	8/12/10	8/12/10
	Trt-Eval Interval				21 DAT	21 DAT	42 DAT	42 DAT	42 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	TIMING 1			2WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H3402									
2	TIMING 1			2WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H9364									
3	TIMING 1			2WATP	1	3	0	8	6	8
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
4	TIMING 1			2WATP	8	8	0	4	8	5
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
5	TIMING 1			2WATP	15	25	0	10	10	10
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
6	TIMING 1			2WATP	25	33	0	5	11	9
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
7	TIMING 1			2WATP	40	43	0	8	15	10
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15	16	17	18
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	STEM	LEAF	PLANT	PLANT
	Rating Data Type				STUNT	INJURY	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/21/10	7/21/10	8/12/10	8/12/10	8/12/10	8/12/10
	Trt-Eval Interval				21 DAT	21 DAT	42 DAT	42 DAT	42 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
8	TIMING 1			2WATP	53	58	0	1	11	6
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
9	TIMING 1			2WATP	3	5	0	9	4	6
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
10	TIMING 1			2WATP	5	8	0	6	5	5
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
11	TIMING 1			2WATP	8	10	0	6	6	6
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
12	TIMING 1			2WATP	19	21	0	6	8	5
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
13	TIMING 1			2WATP	35	41	0	8	9	8
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15	16	17	18
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	STEM	LEAF	PLANT	PLANT
	Rating Data Type				STUNT	INJURY	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/21/10	7/21/10	8/12/10	8/12/10	8/12/10	8/12/10
	Trt-Eval Interval				21 DAT	21 DAT	42 DAT	42 DAT	42 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
14	TIMING 1			2WATP	53	54	0	4	6	5
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
15	TIMING 2			5WATP						
	UNTREATED CONTROL									
	H3402									
16	TIMING 2			5WATP						
	UNTREATED CONTROL									
	H9364									
17	TIMING 2			5WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
18	TIMING 2			5WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
19	TIMING 2			5WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
20	TIMING 2			5WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

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SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
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Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15	16	17	18
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	STEM	LEAF	PLANT	PLANT
	Rating Data Type				STUNT	INJURY	TWIST	CURL	STUNT	INJURY
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/21/10	7/21/10	8/12/10	8/12/10	8/12/10	8/12/10
	Trt-Eval Interval				21 DAT	21 DAT	42 DAT	42 DAT	42 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
21	TIMING 2			5WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
22	TIMING 2			5WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
23	TIMING 2			5WATP						
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
24	TIMING 2			5WATP						
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
25	TIMING 2			5WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
26	TIMING 2			5WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

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SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
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Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15	16	17	18
Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated					PLANT	PLANT	STEM	LEAF	PLANT	PLANT
Rating Data Type					STUNT	INJURY	TWIST	CURL	STUNT	INJURY
Rating Unit					%	%	%	%	%	%
Rating Date					7/21/10	7/21/10	8/12/10	8/12/10	8/12/10	8/12/10
Trt-Eval Interval					21 DAT	21 DAT	42 DAT	42 DAT	42 DAT	42 DAT
# Subsamples, Dec.					0	0	0	0	0	0
27	TIMING 2			5WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
28	TIMING 2			5WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
LSD (P=.05)					5.6	4.9	0	2.6	4.9	2.3
Standard Deviation					4	3.4	0	1.8	3.4	1.6
CV					21.08	15.72	0	34.74	48.15	27.77

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
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Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	19	20	21	22	23	24
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/22/10	7/22/10	7/22/10	7/22/10	7/28/10	7/28/10
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	TIMING 1			2WATP						
	UNTREATED CONTROL									
	H3402									
2	TIMING 1			2WATP						
	UNTREATED CONTROL									
	H9364									
3	TIMING 1			2WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
4	TIMING 1			2WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
5	TIMING 1			2WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
6	TIMING 1			2WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
7	TIMING 1			2WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
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Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	19	20	21	22	23	24
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/22/10	7/22/10	7/22/10	7/22/10	7/28/10	7/28/10
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
8	TIMING 1			2WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
9	TIMING 1			2WATP						
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
10	TIMING 1			2WATP						
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
11	TIMING 1			2WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
12	TIMING 1			2WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
13	TIMING 1			2WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	19	20	21	22	23	24
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/22/10	7/22/10	7/22/10	7/22/10	7/28/10	7/28/10
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
14	TIMING 1			2WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
15	TIMING 2			5WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H3402									
16	TIMING 2			5WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H9364									
17	TIMING 2			5WATP	8	3	19	18	13	14
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
18	TIMING 2			5WATP	5	4	20	18	9	18
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
19	TIMING 2			5WATP	19	13	23	26	16	18
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
20	TIMING 2			5WATP	11	8	28	28	13	19
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	19	20	21	22	23	24
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				STEM	LEAF	PLANT	PLANT	STEM	LEAF
	Rating Data Type				TWIST	CURL	STUNT	INJURY	TWIST	CURL
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/22/10	7/22/10	7/22/10	7/22/10	7/28/10	7/28/10
	Trt-Eval Interval				3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
21	TIMING 2			5WATP	39	13	21	40	26	13
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
22	TIMING 2			5WATP	26	14	26	35	18	11
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
23	TIMING 2			5WATP	20	10	24	25	11	11
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
24	TIMING 2			5WATP	13	9	21	23	9	10
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
25	TIMING 2			5WATP	30	13	29	31	21	13
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
26	TIMING 2			5WATP	20	11	30	29	18	13
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	19	20	21	22	23	24
Crop Code					LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated					STEM	LEAF	PLANT	PLANT	STEM	LEAF
Rating Data Type					TWIST	CURL	STUNT	INJURY	TWIST	CURL
Rating Unit					%	%	%	%	%	%
Rating Date					7/22/10	7/22/10	7/22/10	7/22/10	7/28/10	7/28/10
Trt-Eval Interval					3 DAT	3 DAT	3 DAT	3 DAT	7 DAT	7 DAT
# Subsamples, Dec.					0	0	0	0	0	0
27	TIMING 2			5WATP	74	10	23	61	80	6
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
28	TIMING 2			5WATP	55	15	24	45	63	6
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
LSD (P=.05)					4.7	3.6	4.1	2.6	5	4.9
Standard Deviation					3.3	2.5	2.8	1.9	3.5	3.4
CV					14.53	29.17	13.93	6.86	16.58	31.8

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	25	26	27	28	29	30
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	BLOOM	STEM	LEAF	PLANT
	Rating Data Type				STUNT	INJURY	INCREASE	TWIST	CURL	STRETCH
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/28/10	7/28/10	7/28/10	8/2/10	8/2/10	8/2/10
	Trt-Eval Interval				7 DAT	7 DAT	7 DAT	14 DAT	14 DAT	14 DAT
	# Subsamples, Dec.				0	0		0	0	0
1	TIMING 1			2WATP						
	UNTREATED CONTROL									
	H3402									
2	TIMING 1			2WATP						
	UNTREATED CONTROL									
	H9364									
3	TIMING 1			2WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
4	TIMING 1			2WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
5	TIMING 1			2WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
6	TIMING 1			2WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
7	TIMING 1			2WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	25	26	27	28	29	30
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	BLOOM	STEM	LEAF	PLANT
	Rating Data Type				STUNT	INJURY	INCREASE	TWIST	CURL	STRETCH
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/28/10	7/28/10	7/28/10	8/2/10	8/2/10	8/2/10
	Trt-Eval Interval				7 DAT	7 DAT	7 DAT	14 DAT	14 DAT	14 DAT
	# Subsamples, Dec.				0	0		0	0	0
8	TIMING 1			2WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
9	TIMING 1			2WATP						
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
10	TIMING 1			2WATP						
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
11	TIMING 1			2WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
12	TIMING 1			2WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
13	TIMING 1			2WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	25	26	27	28	29	30
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	BLOOM	STEM	LEAF	PLANT
	Rating Data Type				STUNT	INJURY	INCREASE	TWIST	CURL	STRETCH
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/28/10	7/28/10	7/28/10	8/2/10	8/2/10	8/2/10
	Trt-Eval Interval				7 DAT	7 DAT	7 DAT	14 DAT	14 DAT	14 DAT
	# Subsamples, Dec.				0	0		0	0	0
14	TIMING 1			2WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
15	TIMING 2			5WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H3402									
16	TIMING 2			5WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H9364									
17	TIMING 2			5WATP	29	24	19	0	15	6
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
18	TIMING 2			5WATP	24	23	13	1	9	13
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
19	TIMING 2			5WATP	29	36	94	4	19	10
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
20	TIMING 2			5WATP	25	33	71	0	19	10
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	25	26	27	28	29	30
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	BLOOM	STEM	LEAF	PLANT
	Rating Data Type				STUNT	INJURY	INCREASE	TWIST	CURL	STRETCH
	Rating Unit				%	%	%	%	%	%
	Rating Date				7/28/10	7/28/10	7/28/10	8/2/10	8/2/10	8/2/10
	Trt-Eval Interval				7 DAT	7 DAT	7 DAT	14 DAT	14 DAT	14 DAT
	# Subsamples, Dec.				0	0		0	0	0
21	TIMING 2			5WATP	24	48	100	38	23	10
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
22	TIMING 2			5WATP	24	43	100	19	15	19
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
23	TIMING 2			5WATP	29	20	11	1	10	5
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
24	TIMING 2			5WATP	21	13	0	0	9	10
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
25	TIMING 2			5WATP	31	34	70	0	16	14
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
26	TIMING 2			5WATP	25	26	50	3	19	16
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				PLANT	PLANT	BLOOM	STEM	LEAF	PLANT
Rating Data Type				STUNT	INJURY	INCREASE	TWIST	CURL	STRETCH
Rating Unit				%	%	%	%	%	%
Rating Date				7/28/10	7/28/10	7/28/10	8/2/10	8/2/10	8/2/10
Trt-Eval Interval				7 DAT	7 DAT	7 DAT	14 DAT	14 DAT	14 DAT
# Subsamples, Dec.				0	0		0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	25	26	27	28	29	30
27	TIMING 2			5WATP	26	86	100	58	21	14
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
28	TIMING 2			5WATP	21	64	100	40	20	18
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
LSD (P=.05)					6.1	4.6	7	5.9	3.5	4.6
Standard Deviation					4.2	3.2	5	4.1	2.5	3.2
CV					19.32	10.02	10	35.48	17.74	31.54

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	31	32	33	34	35	36
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	LEAF	PLANT	PLANT	STEM
	Rating Data Type				INJURY	TWIST	CURL	STRETCH	INJURY	TWIST
	Rating Unit				%	%	%	%	%	%
	Rating Date				8/2/10	8/12/10	8/12/10	8/12/10	8/12/10	8/27/10
	Trt-Eval Interval				14 DAT	21 DAT	21 DAT	21 DAT	21 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
1	TIMING 1			2WATP						
	UNTREATED CONTROL									
	H3402									
2	TIMING 1			2WATP						
	UNTREATED CONTROL									
	H9364									
3	TIMING 1			2WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
4	TIMING 1			2WATP						
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
5	TIMING 1			2WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
6	TIMING 1			2WATP						
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
7	TIMING 1			2WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	31	32	33	34	35	36
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	LEAF	PLANT	PLANT	STEM
	Rating Data Type				INJURY	TWIST	CURL	STRETCH	INJURY	TWIST
	Rating Unit				%	%	%	%	%	%
	Rating Date				8/2/10	8/12/10	8/12/10	8/12/10	8/12/10	8/27/10
	Trt-Eval Interval				14 DAT	21 DAT	21 DAT	21 DAT	21 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
8	TIMING 1			2WATP						
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
9	TIMING 1			2WATP						
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
10	TIMING 1			2WATP						
	2, 4, D AMINE (1/300 X)	0.084	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
11	TIMING 1			2WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
12	TIMING 1			2WATP						
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
13	TIMING 1			2WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	31	32	33	34	35	36
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	LEAF	PLANT	PLANT	STEM
	Rating Data Type				INJURY	TWIST	CURL	STRETCH	INJURY	TWIST
	Rating Unit				%	%	%	%	%	%
	Rating Date				8/2/10	8/12/10	8/12/10	8/12/10	8/12/10	8/27/10
	Trt-Eval Interval				14 DAT	21 DAT	21 DAT	21 DAT	21 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
14	TIMING 1			2WATP						
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
15	TIMING 2			5WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H3402									
16	TIMING 2			5WATP	0	0	0	0	0	0
	UNTREATED CONTROL									
	H9364									
17	TIMING 2			5WATP	9	3	16	4	13	0
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
18	TIMING 2			5WATP	11	3	11	4	10	0
	CLARITY (1/300 X)+	0.0533	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
19	TIMING 2			5WATP	14	8	20	4	14	0
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
20	TIMING 2			5WATP	13	3	6	3	10	0
	CLARITY (1/100 X)+	0.16	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	31	32	33	34	35	36
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				PLANT	PLANT	LEAF	PLANT	PLANT	STEM
	Rating Data Type				INJURY	TWIST	CURL	STRETCH	INJURY	TWIST
	Rating Unit				%	%	%	%	%	%
	Rating Date				8/2/10	8/12/10	8/12/10	8/12/10	8/12/10	8/27/10
	Trt-Eval Interval				14 DAT	21 DAT	21 DAT	21 DAT	21 DAT	42 DAT
	# Subsamples, Dec.				0	0	0	0	0	0
21	TIMING 2			5WATP	33	21	16	0	29	8
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
22	TIMING 2			5WATP	20	13	9	4	25	0
	CLARITY (1/30 X)+	0.53	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
23	TIMING 2			5WATP	8	0	11	5	9	0
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
24	TIMING 2			5WATP	9	0	8	5	14	0
	2, 4, D AMINE (1/300 X)	0.085	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
25	TIMING 2			5WATP	13	5	18	13	16	0
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
26	TIMING 2			5WATP	16	5	11	8	14	0
	2, 4, D AMINE (1/100 X)+	0.255	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									

The Ohio State University

TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				PLANT	PLANT	LEAF	PLANT	PLANT	STEM
Rating Data Type				INJURY	TWIST	CURL	STRETCH	INJURY	TWIST
Rating Unit				%	%	%	%	%	%
Rating Date				8/2/10	8/12/10	8/12/10	8/12/10	8/12/10	8/27/10
Trt-Eval Interval				14 DAT	21 DAT	21 DAT	21 DAT	21 DAT	42 DAT
# Subsamples, Dec.				0	0	0	0	0	0
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	31	32	33	34	35	36
27	TIMING 2			5WATP	48	31	29	5	45	0
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H3402									
28	TIMING 2			5WATP	35	26	15	5	31	0
	2, 4, D AMINE (1/30 X)+	0.85	oz/A							
	AMS+	2.5	lb/A							
	NIS	0.5	pt/A							
	H9364									
LSD (P=.05)					4.6	6.7	5.1	3.4	5.1	4.1
Standard Deviation					3.2	4.7	3.5	2.4	3.5	2.8
CV					20.04	56.8	29.12	58.66	21.7	529.15

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	37	38	39	40	41
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				LEAF	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				CURL	STUNT	INJURY	TTL WT	TTL WT
	Rating Unit				%	%	%	LBS/PLOT	TONS/ACRE
	Rating Date				8/27/10	8/27/10	8/27/10	9/28/10	9/28/10
	Trt-Eval Interval				42 DAT	42 DAT	42 DAT	HARVEST	HARVEST
	# Subsamples, Dec.				0	0	0	1	1
1	TIMING 1			2WATP				79.5	43.3
	UNTREATED CONTROL								
	H3402								
2	TIMING 1			2WATP				75	40.8
	UNTREATED CONTROL								
	H9364								
3	TIMING 1			2WATP				69	37.6
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
4	TIMING 1			2WATP				76.7	41.7
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
5	TIMING 1			2WATP				63.2	34.4
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
6	TIMING 1			2WATP				71.3	38.8
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
7	TIMING 1			2WATP				62.3	33.9
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	37	38	39	40	41
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				LEAF	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				CURL	STUNT	INJURY	TTL WT	TTL WT
	Rating Unit				%	%	%	LBS/PLOT	TONS/ACRE
	Rating Date				8/27/10	8/27/10	8/27/10	9/28/10	9/28/10
	Trt-Eval Interval				42 DAT	42 DAT	42 DAT	HARVEST	HARVEST
	# Subsamples, Dec.				0	0	0	1	1
8	TIMING 1			2WATP				67.4	36.7
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
9	TIMING 1			2WATP				72	39.2
	2, 4, D AMINE (1/300 X)	0.084	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
10	TIMING 1			2WATP				75.5	41.1
	2, 4, D AMINE (1/300 X)	0.084	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
11	TIMING 1			2WATP				66.6	36.3
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
12	TIMING 1			2WATP				80.2	43.6
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
13	TIMING 1			2WATP				67.4	36.7
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	37	38	39	40	41
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				LEAF	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				CURL	STUNT	INJURY	TTL WT	TTL WT
	Rating Unit				%	%	%	LBS/PLOT	TONS/ACRE
	Rating Date				8/27/10	8/27/10	8/27/10	9/28/10	9/28/10
	Trt-Eval Interval				42 DAT	42 DAT	42 DAT	HARVEST	HARVEST
	# Subsamples, Dec.				0	0	0	1	1
14	TIMING 1			2WATP				71.8	39.1
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
15	TIMING 2			5WATP	0	0	0	82.9	45.1
	UNTREATED CONTROL								
	H3402								
16	TIMING 2			5WATP	0	0	0	67.4	36.7
	UNTREATED CONTROL								
	H9364								
17	TIMING 2			5WATP	0	0	0	67.5	36.8
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
18	TIMING 2			5WATP	0	0	0	83.5	45.5
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
19	TIMING 2			5WATP	0	0	0	60.5	32.9
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
20	TIMING 2			5WATP	0	0	0	71.3	38.8
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	37	38	39	40	41
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				LEAF	PLANT	PLANT	PLANT	PLANT
	Rating Data Type				CURL	STUNT	INJURY	TTL WT	TTL WT
	Rating Unit				%	%	%	LBS/PLOT	TONS/ACRE
	Rating Date				8/27/10	8/27/10	8/27/10	9/28/10	9/28/10
	Trt-Eval Interval				42 DAT	42 DAT	42 DAT	HARVEST	HARVEST
	# Subsamples, Dec.				0	0	0	1	1
21	TIMING 2			5WATP	0	0	0	75.9	41.3
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
22	TIMING 2			5WATP	0	0	0	69.1	37.6
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
23	TIMING 2			5WATP	0	0	0	72.7	39.6
	2, 4, D AMINE (1/300 X)	0.085	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
24	TIMING 2			5WATP	0	0	0	76.5	41.7
	2, 4, D AMINE (1/300 X)	0.085	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
25	TIMING 2			5WATP	0	0	0	67.3	36.6
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
26	TIMING 2			5WATP	0	0	0	71.9	39.1
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				LEAF	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CURL	STUNT	INJURY	TTL WT	TTL WT
Rating Unit				%	%	%	LBS/PLOT	TONS/ACRE
Rating Date				8/27/10	8/27/10	8/27/10	9/28/10	9/28/10
Trt-Eval Interval				42 DAT	42 DAT	42 DAT	HARVEST	HARVEST
# Subsamples, Dec.				0	0	0	1	1
Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	37	38	39	40	41
27	TIMING 2			5WATP	0	0	0	47.5	25.9
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
28	TIMING 2			5WATP	0	0	0	55.2	30.1
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
LSD (P=.05)					0	0	0	13.8	9.1
Standard Deviation					0	0	0	9.7	6.4
CV					0	0	0	13.7	16.8

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	42	43	44	45	46
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				FRUIT	FRUIT	FRUIT	FRUIT	FRUIT
	Rating Data Type				RED	RED	RED	GREEN	GREEN
	Rating Unit				30 FRUIT	LBS/PLOT	TONS/ACRE	LBS/PLOT	TONS/ACRE
	Rating Date				9/28/10	9/28/10	9/28/10	9/28/10	9/28/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	1	1	1
1	TIMING 1			2WATP	3.7	61.8	10.8	13.2	7.2
	UNTREATED CONTROL								
	H3402								
2	TIMING 1			2WATP	4.3	69.6	12.1	5.3	2.9
	UNTREATED CONTROL								
	H9364								
3	TIMING 1			2WATP	3.7	54.9	9.6	14	7.6
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
4	TIMING 1			2WATP	4.1	67.9	11.8	8.8	4.8
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
5	TIMING 1			2WATP	3.6	45.8	8	17.5	9.5
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
6	TIMING 1			2WATP	4	57.2	10	14.1	7.7
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
7	TIMING 1			2WATP	3.9	44.8	7.8	17.5	9.5
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	42	43	44	45	46
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				FRUIT	FRUIT	FRUIT	FRUIT	FRUIT
	Rating Data Type				RED	RED	RED	GREEN	GREEN
	Rating Unit				30 FRUIT	LBS/PLOT	TONS/ACRE	LBS/PLOT	TONS/ACRE
	Rating Date				9/28/10	9/28/10	9/28/10	9/28/10	9/28/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	1	1	1
8	TIMING 1			2WATP	4.1	53.8	9.4	13.6	7.4
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
9	TIMING 1			2WATP	4.1	58.6	10.2	13.4	7.3
	2, 4, D AMINE (1/300 X)	0.084	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
10	TIMING 1			2WATP	4.1	67.8	11.8	10.1	5.5
	2, 4, D AMINE (1/300 X)	0.084	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
11	TIMING 1			2WATP	3.9	47.6	8.3	18.9	10.3
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
12	TIMING 1			2WATP	4	65.3	11.4	14.9	8.1
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
13	TIMING 1			2WATP	3.6	54.9	9.6	12.6	6.8
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								

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SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	42	43	44	45	46
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				FRUIT	FRUIT	FRUIT	FRUIT	FRUIT
	Rating Data Type				RED	RED	RED	GREEN	GREEN
	Rating Unit				30 FRUIT	LBS/PLOT	TONS/ACRE	LBS/PLOT	TONS/ACRE
	Rating Date				9/28/10	9/28/10	9/28/10	9/28/10	9/28/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	1	1	1
14	TIMING 1			2WATP	3.6	61.8	10.8	10	5.5
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
15	TIMING 2			5WATP	4	70.3	12.3	12.5	6.8
	UNTREATED CONTROL								
	H3402								
16	TIMING 2			5WATP	4	60	10.5	7.3	4
	UNTREATED CONTROL								
	H9364								
17	TIMING 2			5WATP	3.5	47.5	8.3	20.5	11.2
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
18	TIMING 2			5WATP	4.3	69.9	12.2	13.6	7.4
	CLARITY (1/300 X)+	0.0533	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
19	TIMING 2			5WATP	3.6	20.9	3.6	39.6	21.5
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
20	TIMING 2			5WATP	4.1	39	6.8	32.2	17.5
	CLARITY (1/100 X)+	0.16	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	42	43	44	45	46
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				FRUIT	FRUIT	FRUIT	FRUIT	FRUIT
	Rating Data Type				RED	RED	RED	GREEN	GREEN
	Rating Unit				30 FRUIT	LBS/PLOT	TONS/ACRE	LBS/PLOT	TONS/ACRE
	Rating Date				9/28/10	9/28/10	9/28/10	9/28/10	9/28/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	1	1	1
21	TIMING 2			5WATP	3.7	23.8	4.2	52	28.3
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
22	TIMING 2			5WATP	4	19.8	3.4	49.3	26.8
	CLARITY (1/30 X)+	0.53	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
23	TIMING 2			5WATP	3.9	51.9	9	20.7	11.3
	2, 4, D AMINE (1/300 X)	0.085	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
24	TIMING 2			5WATP	4.2	62.3	10.8	14.2	7.7
	2, 4, D AMINE (1/300 X)	0.085	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
25	TIMING 2			5WATP	3.4	40.5	7.1	26.8	14.6
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
26	TIMING 2			5WATP	4.3	50.1	8.7	21.7	11.8
	2, 4, D AMINE (1/100 X)+	0.255	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								

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TOMATOES - EFFECT OF 2,4-D AND DICAMBA
SIMULATED DRIFT

Trial ID: TOM24DDICAMBA 2010
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Trt No.	Treatment Name	Product Rate	Product Rate Unit	Growth Stage	42	43	44	45	46
	Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
	Part Rated				FRUIT	FRUIT	FRUIT	FRUIT	FRUIT
	Rating Data Type				RED	RED	RED	GREEN	GREEN
	Rating Unit				30 FRUIT	LBS/PLOT	TONS/ACRE	LBS/PLOT	TONS/ACRE
	Rating Date				9/28/10	9/28/10	9/28/10	9/28/10	9/28/10
	Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST	HARVEST
	# Subsamples, Dec.				1	1	1	1	1
27	TIMING 2			5WATP	3.5	16.1	2.8	31.4	17.1
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H3402								
28	TIMING 2			5WATP	3.5	25.4	4.4	29.9	16.3
	2, 4, D AMINE (1/30 X)+	0.85	oz/A						
	AMS+	2.5	lb/A						
	NIS	0.5	pt/A						
	H9364								
	LSD (P=.05)				0.6	12.9	2.6	7.1	5.4
	Standard Deviation				0.4	9.0	1.8	4.9	3.8
	CV				10.0	17.9	20.8	24.9	35.3

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: Compare the efficacy of MANA rimsulfuron 25DF with Matrix 25DF on tomato, and determine injury potential of both products.

TRIAL SUMMARY: Pruvin and Matrix are 25% formulations of rimsulfuron. The 4 oz. rate of both herbicides caused slight crop stunting at 3 WAT. Yield with 1 oz Matrix PRE was lower than with all other treartmennts. Weed control was better with PRE treatments than weith POST treatments; however, higher weed pressure in the POST treated plots did not result in yield reductions. Over the term of the experiment, differences in weed control, crop tolerance, and yield between treatments of the two herbicides were trivial.

TRIAL LOCATION

City: Wooster
State/Prov.: Ohio
Postal Code: 44691
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 6/7/10

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1	AGRASS	annual grass	*Setaria, Digitaria* spp.
2	AMBEL	common ragweed	*Ambrosia artimisiifolia* L.
3	CHEAL	common lambsquarters	*Chenopodium album* L.
4	POROL	common purslane	*Porol oleracea* L.
5	SOLPT	Eastern black nightshade	*Solanum ptycanthum* Dun.

Crop 1: LYPES Tomato
Planting Date: 6/18/10
Rate:1 Plant/12"
Row Spacing: 5 FT
Soil Moisture: Slightly wet

Variety: H3402
Planting Method: Machine transplanted
Depth: 2 IN
Seed Bed: Smooth

SITE AND DESIGN

Plot Width, Unit: 5 FT
Site Type: Field
Tillage Type: Moldboard

Plot Length, Unit: 25 FT
Reps: 4
Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 16
% Silt: 72
% Clay: 12

% OM: 3.11
pH: 6.86
CEC: 8.5

Texture: Silt loam
Soil Name: Wooster Silt Loam
Fert. Level: Good

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A	B
Application Date:	6/17/2010	7/13/2010
Time of Day:	4:15 PM	3:30 PM
Application Method:	Spray	Spray
Application Timing:	PRE	POST
Applic. Placement:	Broadcast	Broadcast
Air Temp., Unit:	71.6 F	79.0 F
% Relative Humidity:	65.9	81.8
Dew Presence (Y/N):	N	N
% Cloud Cover:	80	50

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	LYPES, PRE	LYPES, POST
Stage Scale:	None	Vegetative
Height, Unit:	0 IN	11 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	AGRASS , PRE	AGRASS, POST
Stage Scale:	None	5 IN
Density, Unit:	None	Medium, Plot
Weed 2 Code, Stage:	AMBEL, PRE	AMBEL, POST
Stage Scale:	None	3 IN
Density, Unit:	None	Low, Plot
Weed 3 Code, Stage:	CHEAL, PRE	CHEAL, POST
Stage Scale:	None	2 IN
Density, Unit:	None	Medium, Plot
Weed 4 Code, Stage:	POROL , PRE	POROL, POST
Stage Scale:	None	4 IN Diameter
Density, Unit:	None	Medium, Plot
Weed 5 Code, Stage:	SOLPT, PRE	SOLPT, POST
Stage Scale:	None	4 IN
Density, Unit:	None	High, Plot

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	Backpack	Backpack
Operating Pressure:	40	40
Nozzle Type:	Flat Fan	Flat Fan
Nozzle Size:	8002VS	8002VS
Nozzle Spacing, Unit:	18 IN	18 IN
Nozzles/Row:	2	2
Band Width, Unit:	36 IN	36 IN
Boom Height, Unit:	18 IN	18 IN
Ground Speed, Unit:	3.2 MPH	3.2 MPH
Carrier:	H2O	H2O
Spray Volume, Unit:	25 GPA	25 GPA
Propellant:	CO2	CO2

TRIAL COMMENTS:

Trial was sprayed with PRE treatments on 6/17/2010. A single variety was used this year, H3402.The tomato seedlings were transplanted on 6/18/2010. The POST application was applied on 7/13/10. Phyto and efficacy ratings were taken at 7, 21, and 42 days after each application. Weed control was evaluated by species at 14, 28, and 42 days after transplanting. The 0-100 linear scale was used, in which 0 = no crop injury/ no control and 100 = death of crop/complete weed control. For weed density LOW = scattered, just a few weeds; MEDIUM = 3 weed per linear foot of row; HIGH = more than 3 weeds per linear foot of row. Plots were hand harvested on 10/7/10 and 10/8/10. Yield results were based on 5 plants in the center of each plot. Yield data includes total plot weight of all fruit from 5 plants, a 30 fruit (mature)subsample, total marketable (red) per plot, total marketable in tons per acre, immature fruit (green), and cull fruit (rotten or diseased.)

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code								AGRASS	SOLPT
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				PLANT	PLANT	PLANT	PLANT	WEED	WEED
Rating Data Type				CHLOROSIS	STUNT	CHLOROSIS	STUNT	CONTROL	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				6/24/10	6/24/10	7/8/10	7/8/10	7/8/10	7/8/10
Trt-Eval Interval				1 WATPRE	1 WATPRE	3 WATPRE	3 WATPRE	3 WATPRE	3 WATPRE
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5	6
UNTREATED CONTROL				0	0	0	0	0	0
PRUVIN	1	oz/A	PRE	0	0	0	0	44	0
MATRIX	1	oz/A	PRE	0	0	0	0	25	50
PRUVIN	2	oz/A	PRE	0	0	0	0	49	0
MATRIX	2	oz/A	PRE	0	0	0	0	73	0
PRUVIN	4	oz/A	PRE	0	0	0	3	73	0
MATRIX	4	oz/A	PRE	0	0	0	8	97	47
PRUVIN+	1	oz/A	POST						
NIS	0.4	pt/A							
MATRIX+	1	oz/A	POST						
NIS	0.4	pt/A							
PRUVIN+	2	oz/A	POST						
NIS	0.4	pt/A							
MATRIX+	2	oz/A	POST						
NIS	0.4	pt/A							
LSD (P=.05)				0	0	0	4.5	48.7	40.6
Standard Deviation				0	0	0	3	32.8	27.3
CV				0	0	0	211.5	63.8	197.5

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				CHEAL	POROL	AMBEL			AGRASS
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				WEED	WEED	WEED	PLANT	PLANT	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CHLOROSIS	STUNT	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				7/8/10	7/8/10	7/8/10	7/8/10	7/29/10	7/29/10
Trt-Eval Interval				3 WATPRE	3 WATPRE	3 WATPRE	3 WATPRE	6 WATPRE	6 WATPRE
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	7	8	9	10	11	12
UNTREATED CONTROL				0	0	0	0	0	0
PRUVIN	1	oz/A	PRE	25	99	50	0	0	0
MATRIX	1	oz/A	PRE	25	50	0	0	0	20
PRUVIN	2	oz/A	PRE	25	99	25	0	0	50
MATRIX	2	oz/A	PRE	25	74	74	0	0	70
PRUVIN	4	oz/A	PRE	0	99	50	0	0	60
MATRIX	4	oz/A	PRE	99	99	71	0	0	83
PRUVIN+	1	oz/A	POST						
NIS	0.4	pt/A							
MATRIX+	1	oz/A	POST						
NIS	0.4	pt/A							
PRUVIN+	2	oz/A	POST						
NIS	0.4	pt/A							
MATRIX+	2	oz/A	POST						
NIS	0.4	pt/A							
LSD (P=.05)				54	40.4	53	0	0	42.4
Standard Deviation				36.4	27.2	35.7	0	0	28.6
CV				128.6	36.6	92.8	0	0	70.79

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				SOLPT	CHEAL	POROL	AMBEL		AGRASS
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				WEED	WEED	WEED	WEED	PLANT	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	STUNT	CONTROL
Rating Unit				%	%	%	%	%	%
Rating Date				7/29/10	7/29/10	7/29/10	7/29/10	7/20/10	7/20/10
Trt-Eval Interval				6 WATPRE	6 WATPRE	6 WATPRE	6 WATPRE	1 WATPOST	1 WATPOST
# Subsamples, Dec.				0	0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	13	14	15	16	17	18
UNTREATED CONTROL				0	0	0	0		
PRUVIN	1	oz/A	PRE	0	23	70	25		
MATRIX	1	oz/A	PRE	4	0	50	25		
PRUVIN	2	oz/A	PRE	0	45	93	38		
MATRIX	2	oz/A	PRE	0	41	98	48		
PRUVIN	4	oz/A	PRE	8	65	98	63		
MATRIX	4	oz/A	PRE	18	88	79	18		
PRUVIN+	1	oz/A	POST					0	40
NIS	0.4	pt/A							
MATRIX+	1	oz/A	POST					0	85
NIS	0.4	pt/A							
PRUVIN+	2	oz/A	POST					0	80
NIS	0.4	pt/A							
MATRIX+	2	oz/A	POST					0	83
NIS	0.4	pt/A							
LSD (P=.05)				20.1	51.1	41.9	46.5	0	34.6
Standard Deviation				13.5	34.3	28.2	31.3	0	21.7
CV				324	91.8	40.5	101.9	0	30.1

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				SOLPT	CHEAL	POROL	AMBEL	
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				WEED	WEED	WEED	WEED	PLANT
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	STUNT
Rating Unit				%	%	%	%	%
Rating Date				7/20/10	7/20/10	7/20/10	7/20/10	8/3/10
Trt-Eval Interval				1 WATPOST	1 WATPOST	1 WATPOST	1 WATPOST	3 WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	19	20	21	22	23
UNTREATED CONTROL								
PRUVIN	1	oz/A	PRE					
MATRIX	1	oz/A	PRE					
PRUVIN	2	oz/A	PRE					
MATRIX	2	oz/A	PRE					
PRUVIN	4	oz/A	PRE					
MATRIX	4	oz/A	PRE					
PRUVIN+ NIS	1 0.4	oz/A pt/A	POST	0	0	0	0	0
MATRIX+ NIS	1 0.4	oz/A pt/A	POST	0	25	29	0	0
PRUVIN+ NIS	2 0.4	oz/A pt/A	POST	0	75	100	0	0
MATRIX+ NIS	2 0.4	oz/A pt/A	POST	0	100	100	13	0
LSD (P=.05)				0	53.3	32.1	20	0
Standard Deviation				0	33.3	20	12.5	0
CV				0	66.7	35	400	0

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				AGRASS	SOLPT	CHEAL	POROL	AMBEL
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				WEED	WEED	WEED	WEED	WEED
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				8/3/10	8/3/10	8/3/10	8/3/10	8/3/10
Trt-Eval Interval				3 WATPOST	3 WATPOST	3 WATPOST	3 WATPOST	3 WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	24	25	26	27	28
UNTREATED CONTROL								
PRUVIN	1	oz/A	PRE					
MATRIX	1	oz/A	PRE					
PRUVIN	2	oz/A	PRE					
MATRIX	2	oz/A	PRE					
PRUVIN	4	oz/A	PRE					
MATRIX	4	oz/A	PRE					
PRUVIN+	1	oz/A	POST	24	0	0	50	25
NIS	0.4	pt/A						
MATRIX+	1	oz/A	POST	61	0	25	50	25
NIS	0.4	pt/A						
PRUVIN+	2	oz/A	POST	73	0	48	50	63
NIS	0.4	pt/A						
MATRIX+	2	oz/A	POST	88	0	83	75	50
NIS	0.4	pt/A						
LSD (P=.05)				58.3	0	52	93.3	64.9
Standard Deviation				35.7	0	32.5	58.3	39.8
CV				58.3	0	83.9	103.7	97.9

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TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					AGRASS	SOLPT	CHEAL	POROL
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				PLANT	WEED	WEED	WEED	WEED
Rating Data Type				STUNT	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				8/24/10	8/24/10	8/24/10	8/24/10	8/24/10
Trt-Eval Interval				6 WATPOST	6 WATPOST	6 WATPOST	6 WATPOST	6 WATPOST
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	29	30	31	32	33
UNTREATED CONTROL								
PRUVIN	1	oz/A	PRE					
MATRIX	1	oz/A	PRE					
PRUVIN	2	oz/A	PRE					
MATRIX	2	oz/A	PRE					
PRUVIN	4	oz/A	PRE					
MATRIX	4	oz/A	PRE					
PRUVIN+	1	oz/A	POST	0	0	20	0	50
NIS	0.4	pt/A						
MATRIX+	1	oz/A	POST	0	74	13	0	50
NIS	0.4	pt/A						
PRUVIN+	2	oz/A	POST	0	50	25	8	50
NIS	0.4	pt/A						
MATRIX+	2	oz/A	POST	0	25	13	28	99
NIS	0.4	pt/A						
LSD (P=.05)				0	59.0	24.1	30.3	69.8
Standard Deviation				0	36.9	15.1	18.9	43.7
CV				0	99.4	86.4	216.3	70.6

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				AMBEL				
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				WEED	FRUIT	FRUIT	FRUIT	FRUIT
Rating Data Type				CONTROL	TTL YIELD	TTL YIELD	30 RED	YLD RED MKT
Rating Unit				%	LBS/PLOT	TONS/A	LBS/PLOT	LBS/PLOT
Rating Date				8/24/10	10/7/10	10/7/10	10/7/10	10/7/10
Trt-Eval Interval				6 WATPOST	HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.				0	1	1	1	1
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	34	35	36	37	38
UNTREATED CONTROL					50.9	27.7	3	40
PRUVIN	1	oz/A	PRE		58.2	31.7	3.3	51.1
MATRIX	1	oz/A	PRE		53.9	29.3	3.5	43
PRUVIN	2	oz/A	PRE		63.1	34.3	3.5	53.3
MATRIX	2	oz/A	PRE		60.4	32.9	3.3	50.7
PRUVIN	4	oz/A	PRE		66.5	36.2	3.3	56
MATRIX	4	oz/A	PRE		59.2	32.2	3.5	50.1
PRUVIN+	1	oz/A	POST	50	59.6	32.4	3.2	51.4
NIS	0.4	pt/A						
MATRIX+	1	oz/A	POST	25	64.1	34.9	3.4	55.5
NIS	0.4	pt/A						
PRUVIN+	2	oz/A	POST	50	64.1	34.9	3.5	55.3
NIS	0.4	pt/A						
MATRIX+	2	oz/A	POST	15	65.7	35.8	3.4	58
NIS	0.4	pt/A						
LSD (P=.05)				75.4	11.0	6.0	0.4	10.1
Standard Deviation				47.2	7.6	4.2	0.3	7.0
CV				135.9	12.6	12.6	8.2	13.7

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH MATRIX AND PRUVIN

Trial ID: TOMWCCTMATPRUVINW
Location: Wooster, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code							
Crop Code				LYPES	LYPES	LYPES	LYPES
Part Rated				FRUIT	FRUIT	FRUIT	FRUIT
Rating Data Type				YLD RED MKT	YIELD GREEN	YIELD GREEN	YIELD CULL
Rating Unit				TONS/A	LBS/PLOT	TONS/A	LBS/PLOT
Rating Date				10/7/10	10/7/10	10/7/10	10/7/10
Trt-Eval Interval				HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.				1	1	1	1
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	39	40	41	42
UNTREATED CONTROL				21.8	5.7	3.1	5.3
PRUVIN	1	oz/A	PRE	27.8	7.4	4	2.3
MATRIX	1	oz/A	PRE	23.4	7.7	4.2	3.3
PRUVIN	2	oz/A	PRE	29	6.7	3.6	3.3
MATRIX	2	oz/A	PRE	27.6	7.1	3.9	3.5
PRUVIN	4	oz/A	PRE	30.5	7	3.8	3.5
MATRIX	4	oz/A	PRE	27.3	4.4	2.4	4.7
PRUVIN+	1	oz/A	POST	28	4.6	2.5	3.7
NIS	0.4	pt/A					
MATRIX+	1	oz/A	POST	30.2	5	2.7	3.7
NIS	0.4	pt/A					
PRUVIN+	2	oz/A	POST	30.1	5.9	3.2	3
NIS	0.4	pt/A					
MATRIX+	2	oz/A	POST	31.6	5.5	3	2.1
NIS	0.4	pt/A					
LSD (P=.05)				5.5	2.5	1.4	2.3
Standard Deviation				3.8	1.7	0.9	1.6
CV				13.7	28.4	28.4	46.1

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE IN PROCESSING TOMATOES WITH REFLEX

Trial ID: TOMWCCTREFLEX 2010
Location: Fremont, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Objective: Determine tomato tolerance of Reflex applied prior to transplanting compared to local herbicide standards, and evaluate efficacy of Reflex with and without Dual applied to tomato prior to transplanting compared to local herbicide.

TRIAL SUMMARY:

Reflex at 32 oz/A provided the maximum yield. The Dual Magnum /Reflex tank-mix at 16 fluid oz/A provided similar yield with better end-of-season annual grass control.

TRIAL LOCATION

City: Fremont
State: Ohio
Postal Code: 43420
Country: USA

Trial Status: Final
Trial Reliability: Reliable
Initiation Date: 5/27/2010
Planned Completion Date: 10/15/2010

CROP AND WEED DESCRIPTION

Weed	Code	Scientific Name
	1 AGRASS	*Setaria, Digitaria* spp
	2 POROL	*Portulaca oleracea* L.

Crop 1: LYPES — Processing Tomato — Variety: OX 325
Planting Date: 6/3/2010
Rate: 1 Plant/18" — Planting Method: Machine
Row Spacing: 5 FT — Depth: 2 IN
Soil Moisture: Slightly Wet — Seed Bed: Smooth

SITE AND DESIGN

Plot Width, Unit: 5 FT — Plot Length: 25 FT
Site Type: Field
Tillage Type: Conventional Till — Study Design: RACOBL

SOIL DESCRIPTION

% Sand: 20	% OM: 4.4	Texture: Silty Clay Loam
% Silt: 41	pH: 6.6	Soil Name: Hoytville
% Clay: 39	CEC: 27	Fert. Level: Moderate

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE IN PROCESSING TOMATOES WITH REFLEX

Trial ID: TOMWCCTREFLEX 2010
Location: Fremont, Ohio

Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

APPLICATION DESCRIPTION

	A
Application Date:	5/27/2010
Time of Day:	11AM-12PM
Application Method:	Spray
Application Timing:	Pre-Transplant (PRETP)
Applic. Placement:	Broadcast
Air Temp., Unit:	83.7 F
% Relative Humidity:	57.3
Wind Velocity, Unit:	6.5 MPH
% Cloud Cover:	30

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	LYPES
Stage Scale:	Vegetative
Height, Unit:	6 IN

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	AGRASS, PRETP
Stage Scale:	None
Density, Unit:	None
Weed 2 Code, Stage:	POROL, PRETP
Stage Scale:	None
Density, Unit:	None

APPLICATION EQUIPMENT

	A
Appl. Equipment:	Backpack
Operating Pressure:	40 PSI
Nozzle Type:	Flat Fan
Nozzle Size:	8002VS
Nozzle Spacing, Unit:	15 IN
Nozzles/Row:	4
Band Width, Unit:	60 IN
Boom Height, Unit:	18 IN
Ground Speed, Unit:	2.65 MPH
Spray Volume, Unit:	25 GPA
Propellant:	CO2

TRIAL COMMENTS:

Crop tolerance ratings were taken at 7, 14, 28 and 42 days after transplanting. Weed control ratings were taken at 14, 28, and 42 days after transplanting by species. The 0-100 linear scale was used, in which 0 = no crop injury /no control, and 100 = death of crop/complete weed control. For weed density: LOW = scattered, just a few weeds MEDIUM = 1 weed per 3 square feet of row; HIGH = more than 1 weed per 3 square feet of row. Due to wet field conditions plants were hand harvested on 9/30/2010. Yield results were based on 5 plants in the center of each plot. Yield data includes: total plot weight, a 30 fruit red marketable subsample, red marketable, green immature fruit , and cull fruit taken in pounds and converted to tons/acre.

The Ohio State University

TOMATOES - WEED CONTROL AND CROP TOLERANCE WITH REFLEX

Trial ID: TOMWCCTREFLE›
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code								
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				PLANT	PLANT	PLANT	PLANT	PLANT
Rating Data Type				CHLOROSIS	STUNT	CHLOROSIS	STUNT	CHLOROSIS
Rating Unit				%	%	%	%	%
Rating Date				6/10/10	6/10/10	6/17/10	6/17/10	6/24/10
Trt-Eval Interval				7 DATP	7 DATP	14 DATP	14 DATP	21 DATP
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	1	2	3	4	5
UNTREATED CONTROL				0	0	0	0	0
WEED FREE CONTROL				0	0	0	0	0
REFLEX	16	fl oz/a	PRETP	0	3	0	1	0
REFLEX	20	fl oz/a	PRETP	0	1	0	1	0
REFLEX	24	fl oz/a	PRETP	0	0	0	0	0
REFLEX	32	fl oz/a	PRETP	0	1	0	1	0
REFLEX	48	fl oz/a	PRETP	0	14	0	8	0
REFLEX+	16	fl oz/a	PRETP	0	6	0	4	0
DUAL MAGNUM	16	fl oz/a	PRETP					
REFLEX+	24	fl oz/a	PRETP	0	9	0	5	0
DUAL MAGNUM	16	fl oz/a	PRETP					
DUAL MAGNUM+	1.33	pt/a	PRETP	0	0	0	0	0
SENCOR	10.7	oz/a	PRETP					
LSD (P=.05)				0	5.7	0	3.4	0
Standard Deviation				0	3.9	0	2.3	0
CV				0	115.72	0	115.87	0

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Trial ID: TOMWCCTREFLE›
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code					AGRASS	POROL		AGRASS
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				PLANT	WEED	WEED	PLANT	WEED
Rating Data Type				STUNT	CONTROL	CONTROL	STUNT	CONTROL
Rating Unit				%	%	%	%	%
Rating Date				6/24/10	6/24/10	6/24/10	7/15/10	7/15/10
Trt-Eval Interval				21 DATP	21 DATP	21 DATP	42 DATP	42 DATP
# Subsamples, Dec.				0	0	0	0	0
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	6	7	8	9	10
UNTREATED CONTROL				0	0	0	0	0
WEED FREE CONTROL				0	100	100	0	100
REFLEX	16	fl oz/a	PRETP	0	50	85	0	50
REFLEX	20	fl oz/a	PRETP	0	50	85	0	25
REFLEX	24	fl oz/a	PRETP	0	49	83	0	24
REFLEX	32	fl oz/a	PRETP	1	50	93	0	25
REFLEX	48	fl oz/a	PRETP	1	100	93	0	72
REFLEX+	16	fl oz/a	PRETP	0	100	85	0	99
DUAL MAGNUM	16	fl oz/a	PRETP					
REFLEX+	24	fl oz/a	PRETP	3	98	89	0	97
DUAL MAGNUM	16	fl oz/a	PRETP					
DUAL MAGNUM+	1.33	pt/a	PRETP	0	50	86	0	74
SENCOR	10.7	oz/a	PRETP					
LSD (P=.05)				2.5	56.6	10.1	2.3	57.9
Standard Deviation				1.7	39	7	1.6	39.9
CV				349.6	60.33	8.77	632.46	70.76

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Trial ID: TOMWCCTREFLE›
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code				POROL				
Crop Code				LYPES	LYPES	LYPES	LYPES	LYPES
Part Rated				WEED	FRUIT	FRUIT	FRUIT	FRUIT
Rating Data Type				CONTROL	TOTAL YIELD	TOTAL YIELD	30 FRUIT	RED MKTB
Rating Unit				%	LBS/PLOT	TONS/ACRE	LBS	LBS/PLOT
Rating Date				7/15/10	9/30/10	9/30/10	9/30/10	9/30/10
Trt-Eval Interval				42 DATP	HARVEST	HARVEST	HARVEST	HARVEST
# Subsamples, Dec.				0	1	1	1	1
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	11	12		13	14
UNTREATED CONTROL				0	31.7	17.3	3.5	23.9
WEED FREE CONTROL				100	39.7	21.6	3.6	22.5
REFLEX	16	fl oz/a	PRETP	76	43.7	23.8	3.4	32.7
REFLEX	20	fl oz/a	PRETP	78	37.8	20.6	3.8	22.7
REFLEX	24	fl oz/a	PRETP	75	36.3	19.8	3.9	23.1
REFLEX	32	fl oz/a	PRETP	89	46.1	25.1	3.9	38.8
REFLEX	48	fl oz/a	PRETP	86	41.8	22.8	4	26
REFLEX+	16	fl oz/a	PRETP	81	42.2	23	3.8	34.8
DUAL MAGNUM	16	fl oz/a	PRETP					
REFLEX+	24	fl oz/a	PRETP	85	40.4	22	3.8	25.8
DUAL MAGNUM	16	fl oz/a	PRETP					
DUAL MAGNUM+	1.33	pt/a	PRETP	55	34.8	18.9	3.8	27.2
SENCOR	10.7	oz/a	PRETP					
LSD (P=.05)				13.7	7.37	4.01	0.55	11.3
Standard Deviation				9.4	5.08	2.77	0.38	7.79
CV				12.99	12.88	12.88	10.19	28.08

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Trial ID: TOMWCCTREFLE›
Location: Fremont, Ohio
Study Dir.: Doug Doohan and Tim Koch
Investigator: Doug Doohan

Weed Code						
Crop Code				LYPES	LYPES	LYPES
Part Rated				FRUIT	FRUIT	FRUIT
Rating Data Type				RED MKTB	GREEN	GREEN
Rating Unit				TONS/A	LBS/PLOT	TONS/ACRE
Rating Date				9/30/10	9/30/10	9/30/10
Trt-Eval Interval				HARVEST	HARVEST	HARVEST
# Subsamples, Dec.				1	1	1
Treatment Name	Product Rate	Product Rate Unit	Growth Stage	15	16	
UNTREATED CONTROL				13	3.5	1.9
WEED FREE CONTROL				12.2	4.7	2.5
REFLEX	16	fl oz/a	PRETP	17.8	5	2.7
REFLEX	20	fl oz/a	PRETP	12.4	3.7	2
REFLEX	24	fl oz/a	PRETP	12.6	3	1.6
REFLEX	32	fl oz/a	PRETP	21.1	3.5	1.9
REFLEX	48	fl oz/a	PRETP	14.1	3.9	2.1
REFLEX+	16	fl oz/a	PRETP	18.9	3.5	1.9
DUAL MAGNUM	16	fl oz/a	PRETP			
REFLEX+	24	fl oz/a	PRETP	14.1	3.9	2.1
DUAL MAGNUM	16	fl oz/a	PRETP			
DUAL MAGNUM+	1.33	pt/a	PRETP	14.8	3.3	1.8
SENCOR	10.7	oz/a	PRETP			
LSD (P=.05)				6.15	1.97	1.07
Standard Deviation				4.24	1.36	0.74
CV				28.08	35.86	35.86